

In The Matter Of:

*UNIVERSAL CITY STUDIOS, INC., et al v.
SHAWN C. REIMERDES, et al*

*Trial Volume 1
July 17, 2000*

*SOUTHERN DISTRICT REPORTERS, P.C.
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[1] UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK
[2]
[3] UNIVERSAL CITY STUDIOS, INC.,
et al,
[4]
Plaintiffs,
[5]
v. 00 Civ. 277 (LAK)
[6]
SHAWN C. REIMERDES, et al,
[7]
Defendants.
[8]
[9]
July 17, 2000
9:00 a.m.
[10]
[11] Before:
[12] HON. LEWIS A. KAPLAN,
[13] District Judge
[14] APPEARANCES
[15] PROSKAUER, ROSE, L.L.P.
Attorneys for Plaintiffs
[16] BY: LEON P. GOLD
CHARLES S. SIMS
[17] CARLA MILLER
WILLIAM M. HART
[18]
FRANKFURT, GARBUS, KLEIN & SELZ
[19] Attorneys for Defendants
BY: MARTIN GARBUS
[20] ERNEST HERNSTADT
DAVID ATLAS
[21]
[22]
[23]
[24]
[25]

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[1] **THE CLERK:** Universal versus Reimerdes. Is the
[2] plaintiff ready?
[3] **MR GOLD:** Ready for the plaintiff.
[4] **THE CLERK:** Is the defendant ready?
[5] **MR. GARBUS:** We are not, we understand we are going
[6] ahead.
[7] **THE COURT:** You are going ahead, unless you have some
[8] new reason to tell me that I haven't heard before.
[9] **MR. GARBUS:** We have a motion pending and it seems to
[10] me that it would be appropriate until such time that the Court
[11] renders a decision to not go ahead.
[12] **THE COURT:** You are going ahead. I am not rendering
[13] any opinion now, but rather in the course of the morning or
[14] perhaps later in the day.
[15] **MR. GARBUS:** May we have an opportunity to go to the
[16] Second Circuit to get a stay?
[17] **THE COURT:** You have the opportunity to do whatever
[18] you want, but the trial is now and if you wish to make an
[19] opening statement, I will hear it now.
[20] **MR. GARBUS:** Would the Court grant a stay?
[21] **THE COURT:** No.
[22] **MR. GARBUS:** Then we will immediately go to the
[23] Second Circuit. I will make an opening statement.
[24] **THE COURT:** You are the defendant, Mr. Garbus. The
[25] plaintiff goes first.

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[1] **MR. GARBUS:** Thank you very much.
[2] **THE COURT:** Mr. Gold, you may proceed.
[3] **MR GOLD:** Thank you, your Honor. Good morning. My
[4] name is Leon Gold.
[5] **MR. GARBUS:** May I just interrupt one moment?
[6] If I understand your ruling, we cannot go to the
[7] Second Circuit until such time that we have a decision?
[8] **THE COURT:** You will have it shortly.
[9] Mr. Gold?
[10] **MR GOLD:** My name is still Leon Gold. I'm a partner
[11] at Proskauer Rose and I represent the motion picture studio
[12] plaintiffs.
[13] In 1998, Congress recognized the ease with which
[14] digital copyrighted works such as movies and records could be
[15] copied and distributed worldwide virtually instantaneously via
[16] the Internet subjecting copyright owners to losses of material
[17] portions of the value of their copyrights virtually overnight.
[18] Congress determined that sound copyright economic and
[19] Internet policy dictated that this risk of loss had to be
[20] addressed. Congress then provided that extra protection over
[21] and above existing copyright laws that were needed for the
[22] works since disastrous harm could occur well before any Court
[23] could act under the copyright laws, well before plaintiffs
[24] could get injunctions for infringement or copyright or for
[25] contributor infringement.

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[1] The anticircumvention law was passed as a result.
[2] Defendants and their supporters disagree with Congress'
[3] findings and with the anticircumvention law. They believe the
[4] interests of a free Internet, of free access to digital copies
[5] of movies, records and books deserve more respect and more
[6] attention than protection of copyrighted artistic work.
[7] They believe in the right to take this work without
[8] any permission, but no one has the right to steal another
[9] person's copyright to steal their intellectual property and
[10] Congress may provide and has provided additional protection
[11] for intellectual property when new technology has
[12] substantially increased the risks of infringement.
[13] We note this is not the appropriate forum for the
[14] expression of defendant's beliefs about effective social,
[15] economic and Internet policy. Congress has decided and we
[16] respectfully submit the Courts must act promptly to protect
[17] these interests in the manner that Congress intended. Not to
[18] do so eliminates the purposes, eliminates the existence truly
[19] of the act in question.
[20] In the anticircumvention law Congress provided that
[21] owners of copyright digital materials could protect their work
[22] with technological measures which would prevent unauthorized
[23] access to their copyrighted works. Congress provided that if
[24] copyright owners protected their works with such measures,
[25] circumvention devices could not be offered or trafficked to

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[1] the public and trafficking in such a device was forbidden and
[2] could be enjoined by a Federal Court.
[3] Congress intended that the injury that the Court
[4] would protect against would be the loss of the device
[5] protecting the copyrighted material. The security afforded by
[6] such protective device is the asset protected by the
[7] anticircumvention law.
[8] Plaintiff's harm is first the loss of that asset
[9] which could create irreparable loss and the threat of
[10] uncontrollable copying. After all, we will show the studios
[11] were not going to go forward into the digital world with this
[12] new product, DVD, without such protective technology.
[13] Congress did not provide that the Court would not
[14] grant injunctions in the anticircumvention law until actual
[15] infringement, actual copying or contributory infringement took
[16] place. Had Congress imposed that prerequisite, there would
[17] have been no need for the anticircumvention law in the first
[18] place.
[19] We will briefly show that when digital copyrighted
[20] material — and I'm referring now to music on CD's — were
[21] sold without inscription to protect against access to the
[22] artistic work, the record — the record industry found that
[23] all of its copyrighted work were infringed and that virtually
[24] every copyrighted song in their libraries were all made
[25] available on the Internet via Napster at no cost with millions

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[1] and millions of downloads of songs taking place every week.
[2] For months, the record companies have been working
[3] their way to a preliminary injunction hearing which is, in
[4] fact, scheduled for July 26th. Napster, the operation of the
[5] a center of this activity, is the most frequently visited web
[6] site in the U.S. However, movie companies with respect to
[7] DVD's were able to take advantage of inscription and the
[8] digital millennium copyright act and are here to protect
[9] against such a result, protect against waking up one morning
[10] and finding out they've been Napsterized and only then seeking
[11] to enjoin the copyright.
[12] Once record companies' songs have been copied and
[13] widely distributed, something that happens right away,
[14] irreparable harm has taken place. Defendants argue that the
[15] DeCSS does not quite yet provide a threat of copying because
[16] copying is many months to several years away, but even
[17] defendants don't deny that at some point, overwhelming — the
[18] overwhelming probability of copying and transmission over the
[19] Internet will take place.
[20] The movie companies, however, prefer to rely on DMCA
[21] rather than the assurances of those who make such assertions.
[22] Plaintiffs want to keep their films protected.
[23] The Internet now contains offerings of movies with
[24] good visual and audio quality, something that did not happen
[25] before the advent of DeCSS. Buyer rated movies played from

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[1] decrypted DVD's are also now being sold in hard copies. It
[2] doesn't take a rocket scientist to understand how this
[3] happened.
[4] Defendants are wrong because decryption of DVD's with
[5] DeCSS and the offering and transmission of the contents on the
[6] Internet has begun, as your Honor will soon see. It's picking
[7] up steam and it will become an avalanche unless halted by this
[8] Court.
[9] Once a film is decrypted and exchangeable on the Net
[10] for down loading, that film's protection is lost for good.
[11] More powerful transmission lines at increased hard drive
[12] storage capacities are the most rapidly developing area of
[13] current Internet development. That makes the copy problem a
[14] certainty. The danger of immense harm is upon plaintiffs. We
[15] will clearly show in this case our right to an injunction.
[16] We will establish that CSS is a device meant to be
[17] protected under the statute and that trafficking in DeCSS is
[18] unlawful. The studios will show that CSS is a technological
[19] measure effectively controlling access to copyrighted DVD
[20] movies.
[21] In the ordinary course of its operations, it requires
[22] the application of information or a process or a treatment
[23] with the authority of the copyright owner to gain access to
[24] the work. The studios will show that DeCSS is a technology, a
[25] device, a component designed for the purpose of circumventing

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[1] CSS and placed in a copy — placing a copy of the DVD movie on
[2] the user's hard drive. We will show it has no other purpose.
[3] The studios will show that DeCSS has a limited
[4] commercially-significant purpose or use other than to
[5] circumvent. It has no such commercial purpose other than to
[6] circumvent.

[7] Defendants admit that they've posted DeCSS on their
[8] web site and have linked to other web sites which post DeCSS
[9] and, thus, have offered this device to the public and
[10] trafficked in DeCSS.

[11] As we have set forth in our in limine motions, we
[12] submit respectfully that there aren't any material triable
[13] issues in this case. The reverse engineering and
[14] cryptographic research exceptions don't apply to our
[15] trafficking claims as a matter of statutory policy and
[16] statutory interpretation and because defendants have admitted
[17] their acts had nothing to do with reverse engineering or
[18] cryptographic research.

[19] Fair use is not a defense to a trafficking claim and,
[20] your Honor, that some few people may make some acceptable use
[21] of DeCSS does not excuse offering it to the world on the
[22] Internet.

[23] Finally, plaintiffs have already suffered great
[24] damage because their protective device has been taken away by
[25] defendant's acts. Their films are on DVD's are no longer

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[1] protected by an anticircumvention device. Plaintiffs would
[2] not have issued DVD's without a protective encryption system
[3] and the threat of widespread copying is here and the process
[4] has begun.

[5] Your Honor, this case relates to the protection of
[6] artistic works and to the health of the American motion
[7] picture industry. While the computer and the Internet are
[8] extraordinary developments that have an impact on every person
[9] in the world every day, still the computer and the Internet
[10] are machines and systems with no moral sense and no ability to
[11] choose the ends to which they are put.

[12] Like the old machines and the old system and the old
[13] systems, these new technologies can be used to promote
[14] artistic expression, economic growth and educational
[15] opportunities or they can be used to steal and invade the
[16] rights guaranteed by our Constitution and our laws.

[17] Congress has made some critically important policy
[18] decisions with respect to some of these matters. The Digital
[19] Millennium Copyright Act is one of those decisions. As we all
[20] know, laws passed by legislative bodies, Congress' acts can be
[21] rendered meaningless by the absence of prompt enforcement of
[22] Congress' will. Then chaos will reign and the most important
[23] technological developments of our age will be employed to our
[24] detriment.

[25] We note that there are a large number of brilliant

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[1] creative productive people who lead the American technological
[2] revolution. Their wisdom and counsel are critical to
[3] solutions of some of these problems. However, their voices
[4] will not be heard in this trial.

[5] A good deal of loud noise, much of it irrelevant and
[6] much of it untrue, has preceded today's events. Today the
[7] rule of law begins to assert itself. It's a welcome day.

[8] Your Honor, plaintiffs are ready and anxious to
[9] present their case.

[10] **THE COURT:** Thank you, Mr. Gold.

[11] Mr. Garbus?

[12] **MR. GARBUS:** Your Honor, it's a great privilege and a
[13] pleasure to be here and to argue and to deal with the issues
[14] that are raised by this statute. The statute — this is the
[15] first case interpreting that statute. This is a statute that
[16] will define the future of American technology in many ways.
[17] In many ways, it will define how the technology and the laws
[18] will encompass each other.

[19] The position that we take, which is very clear is one
[20] of protection, is one of protection of copyright interests and
[21] one of protection of the First Amendment and one of protection
[22] of fair use, a concept that has been with us for a very long
[23] period of time.

[24] (Continued on next page)

[25]

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[1] **MR. GARBUS:** The issue that we are facing I think is
[2] a little more complicated than I think Mr. Gold makes it out
[3] to be. I think the issue is how do you balance the need for
[4] copyright protection. After all, the Constitution talks about
[5] the creation of copyright, we recognize that copyright must be
[6] protected so that artists and creators can be reimbursed for
[7] the work that they do, and we recognize that movie studios and
[8] others must also be reimbursed and entitled to make whatever
[9] profit that they can make as a result of the work that they
[10] do. We also recognize — and your Honor has seen in this
[11] case, many of the other issues that are involved. We
[12] recognize that there are certain needs for research, there are
[13] certain needs for technology, there are certain needs for
[14] librarians. The case is larger than I think Mr. Gold
[15] interprets it, and I think that the facts are different than
[16] the facts that were given to the Court in the first instance.

[17] It turns out that the DeCSS or the cracks of the
[18] codes go back to 1997, and the avalanche that the movie
[19] studios have been talking about have never occurred. The most
[20] recent experiment that we learned about, and we learned about
[21] it in this case — and you will hear it from the first witness
[22] that the plaintiff calls, Mr. Michael Shamos — and what
[23] Mr. Shamos tells you is that after trying to download a DVD,
[24] and then to do this illegal copying, it took him working in
[25] the middle of the night with an assistant some 20 hours to do

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[1] it. And what you will learn is the kind of technology that he
[2] had when he did it. You will also hear from our experts what
[3] it takes most people in a normal time to do. This is not the
[4] Napster case. The fundamental issue here — and it's a very
[5] complicated one, and we have not had a chance to develop it —
[6] is what is the future of the Internet, to what extent do all
[7] the horrors that Mr. Gold talks about really ever take place.
[8] How fast will things move? How fast will they move within a
[9] year? How fast will they move within two years? How long
[10] will DVDs be around? How long will there be other encryption
[11] systems.

[12] You will hear that the motion picture industry said
[13] in testimony to Congress back in May out in Stamford that DVD
[14] audio for example, and they raised all the horrors, cannot be
[15] distributed, cannot be shown, is not available, and they have
[16] said that it was withdrawn for a variety of reasons. We will
[17] show you in court that you can walk out today to Tower and buy
[18] these DVD audios.

[19] There was testimony in the case, and you have seen
[20] the affidavits, about the DVD audios, that they stopped making
[21] the machines. You can go out to Tower and buy the machines.

[22] So, what you will find I think with respect to each
[23] claim is that it is false, it is easy to say in a case the sky
[24] is going to fall tomorrow.

[25] What happened in the Napster case, the downloading

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[1] has not happened here. What he is talking about is something
[2] that may happen in the future. If that future happens, then
[3] you have what happens in the Napster case, you go out to the
[4] people who did the file sharing. I told you at the very
[5] beginning of the trial, and they told you something opposite
[6] than what I said, and you said one of us was speaking baloney.

[7] As of yesterday, they did not have the name of one
[8] single person who had ever used DeCSS to illegally copy a
[9] film. As of yesterday they did not know of one single
[10] instance of illegal copying of a film.

[11] The MPA has extraordinary resources. What you will
[12] learn in this case is that early on they learned exactly about
[13] the breaks and they learned exactly about the Linux Group and
[14] the attempt to make a Linux. Now what happens to the owner of
[15] the DVD, the movie studio that makes the DVD? The Linux
[16] player, if you take the DVD, the Linux person buys it, he pays
[17] \$15, he pays \$20, and he puts it in his Linux machine. And
[18] the owner of the DVD gets paid for that. The only thing that
[19] that Linux operator may not have is a license. You are
[20] familiar with the license structure. We have gone through the
[21] license structure at great length.

[22] You will I think also hear from some of the other
[23] plaintiffs' witnesses today, and you will learn from them that
[24] up until a little while ago not one of them — this is the MPA
[25] with its vast resources — had every tried to do this

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[1] allegedly illegal act, even though they came into court and
[2] said it was going to happen tomorrow. Not one of them, with
[3] the vast resources of the MPA, the vast resources of the
[4] motion picture industry, the vast resources of the DVD, can
[5] point to one single case of copying, not one person, not one
[6] single place.

[7] They have chosen as a defendant Mr. Goldstein. The
[8] reason they have chosen Mr. Goldstein is obvious. There are
[9] university sites that post DeCSS object and source codes.
[10] There are newspapers, the San Jose Mercury News, the New York
[11] Times, that link the sites.

[12] Disney is a plaintiff in this case. If you go to
[13] Disney's search engine and you type in DeCSS and make a
[14] search, you will find sites all over the place. If you go to
[15] Go, which is also Disney's search engine, you will also find
[16] sites, forgetting about Mr. Goldstein, all over the place.

[17] The statute is very clear with respect to the
[18] benefits that a journalist has. I will shortly before I

[19] finish just answer the question that you placed last week with
[20] respect to where you saw the issues in this case.

[21] Before I do that, I note, and you have noted, that
[22] the academics from the leading universities have come in on
[23] the side of the defendants in this case. You have briefs
[24] submitted by Professor Samuelson at the very eminent Berkeley
[25] Center, you have affidavits of Professor Nesson at Harvard

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[1] University, from Margaret Smith at Harvard University,
[2] Professor Bengler at NYU, and Professor Moglen at Columbia.
[3] So that the issues in this case are far more complex I think
[4] than my friend Mr. Gold concedes.

[5] I recognize that this case is only the very first
[6] small step. It's a beginning in deciding these issues. As a
[7] trial court judge the inclination to overrule a law of
[8] Congress because it's bad would be inappropriate. We are not
[9] saying you should overrule a law because it's a bad law. I
[10] don't think that's the function of the argument that's being
[11] made here today. I think that this case will proceed. It
[12] will go to the Second Circuit, it will go to the United States
[13] Supreme Court. I think all of us have a very heavy
[14] responsibility to make a record in this case that is adequate
[15] for the kinds of determinations that are going to be made for
[16] a statute of this kind.

[17] At the end of the day DVD, there may or may not be
[18] DVD movies, but there will be at least for a period of time
[19] DVD encryptions on books, DVD encryptions on audio, which is
[20] now out, contrary to what the MPA said.

[21] So, what you are really talking about is does this
[22] new digital technology fundamentally mean the end of fair use.
[23] And that is the issue that is faced. And when the MPA went to
[24] Congress, they said we have reconciled it. Betamax is still
[25] the law, there still is fair use. I won't go through Betamax

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[1] with you. The Court knows it. I won't go through the Sega
[2] case with you. The Court knows it. I won't go through the
[3] Connectix case again because the Court knows it. I won't go
[4] through the monopoly issues again because the Court knows
[5] them.

[6] Again I think it's a privilege for all of us to be
[7] here and to have a chance to establish a record that many
[8] courts and judges and the public will be looking at in the
[9] years to come. Thank you.

[10] **THE COURT:** Thank you, Mr. Garbus. Mr. Gold, your
[11] first witness.

[12] **MR. GOLD:** Mr. Sims will present our first witness.

[13] **MR. SIMS:** Dr. Michael Shamos.

[14] **THE COURT:** I am one of the judges who requires one
[15] lawyer for each witness. The first lawyer who objects on
[16] direct or questions on cross will be the lawyer for that
[17] witness.

[18] **MICHAEL I. SHAMOS,**
[19] called as a witness by the Plaintiffs,
[20] having been duly sworn, testified as follows:

[21] **MR. GARBUS:** I presume with respect to whether a
[22] witness is qualified as an expert or not, given this is a
[23] nonjury trial, you may care to hear that at some other time.
[24] Or would you care to have that at the very beginning.

[25] **THE COURT:** I don't need to have it at the very

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[1] beginning. I don't follow the practice of having the witness
[2] tendered. If there is an objection on the grounds of
[3] expertise, you should make the objection, and if I think I
[4] need to hear argument, I will hear it. If not, we will
[5] reserve it.

[6] **MR. GARBUS:** Mr. Hernstadt was going to make that,
[7] but I was going to cross-examine the witness. I don't know if
[8] that violates your rule.

[9] **THE COURT:** Technically, but I will allow you to do
[10] that.

[11] **MR. SIMS:** I think if you stay about an inch or so
[12] further from the microphone, the sounds might be a little
[13] better.

[14] **MR. GARBUS:** Does Mr. Hernstadt now make the
[15] objection or —

[16] **THE COURT:** I don't even know what the questions are,
[17] so I can't very well rule on the objection. There will come a
[18] point I suppose when Mr. Sims is going to ask him do you have
[19] an opinion on some subject, and then if one of you, either one
[20] of you wants to make that objections, I will hear whichever
[21] wants to make it.

[22] **MR. HERNSTADT:** Your Honor, we are objecting to
[23] presenting any evidence. If he is being presented as a fact
[24] witness, almost all of the evidence he is going to present is
[25] hearsay. If he is being presented as an expert, he is

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[1] presenting evidence based on the work of his assistant which
[2] in large part he didn't even observe and without a basis for
[3] the expert testimony.

[4] **THE COURT:** Let's do this one step at a time, please.

[5] **MR. SIMS:** I really had plans to do this the old
[6] school way and present the witness's qualifications. I think
[7] it will be clear at the right point.

[8] **DIRECT EXAMINATION**

[9] **BY MR. SIMS:**

[10] **Q:** Dr. Shamos, what is your current occupation?

[11] **A:** I am currently employed on the faculty of Carnegie Mellon
[12] University in Pittsburgh, Pennsylvania. I am director of the
[13] Universal Library and codirector of the Institute of
[14] Electronic Commerce at CMU. I have a senior faculty position
[15] in the School of Computer Science and the Graduate School of
[16] Industrial Administration, which is CMU's business school.

[17] **Q:** What is the Universal Library?

[18] **A:** The Universal Library is a project in which we are
[19] attempting to digitize all public domain works and make them
[20] available over the Internet.

[21] **Q:** Do you hold any positions with respect to e-commerce?

[22] **A:** Yes, as I mentioned I'm codirector of the Institute for
[23] Electronic Commerce. I'm in charge of the academic program in
[24] electronic commerce from the technology side as opposed to the
[25] business side.

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[1] **Q:** Describe briefly your educational and employment
[2] backgrounds.

[3] **A:** Yes. I began computer programming while in high school in
[4] 1962 and have been programming ever since then. I went to
[5] Princeton University but was obliged to major in physics
[6] because the field of computer science was not offered as a
[7] major when I started.

[8] I graduated from Princeton in 1968 with a Bachelors
[9] degree in physics. I immediately began working for IBM
[10] corporation in East Fishkill, New York. I was a programmer
[11] programming automated test equipment to test integrated
[12] circuits.

[13] During the Vietnam era I was obliged to go into the
[14] Service. I entered the public health service in 1970, served
[15] at the National Institutes of Health, the Cancer Chemotherapy
[16] National Service Center in Bethesda, Maryland, where I was a
[17] supervisory programmer looking after systems that processed
[18] cancer test data.

[19] In 1972 I went to Yale University to obtain a Ph.D.
[20] in computer science. Yale had just begun its department. I
[21] left Yale in 1975 to take a faculty position at Carnegie
[22] Mellon. I was hired in the computer science and mathematics
[23] departments there from 1975, received my Ph.D. from Yale in
[24] 1978 and I —

[25] **THE COURT:** What field?

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[1] **THE WITNESS:** Ph.D. was in computer science.
[2] In 1978 I began to study law. While I was a faculty
[3] member at CMU I was a law student at night, I went to Duquesne
[4] University in Pittsburgh and obtained a law degree in 1981.
[5] 1981 I left the university because I had started a
[6] computer software company. We were selling the precursor of
[7] desk top publishing software based on some technology that had
[8] been developed at CMU.

[9] From 1981 until 1987 I was the president of two
[10] software companies in Pittsburgh which I sold in 1987, took
[11] what might be referred as a sabbatical for the next three
[12] years, and in 1990 I joined the Webb law firm. That's
[13] W-E-B-B, a law firm in Pittsburgh, Pennsylvania, which is the
[14] largest intellectual property practice in western PA. I was
[15] an attorney there rising to partner.

[16] I left the practice of full-time law in 1998 to
[17] return to Carnegie Mellon University to direct the Universal
[18] Library project. When we began the Institute for Electronic
[19] e-commerce the next year, I was named codirector of that and
[20] have been teaching in it ever since.

[21] **Q:** Describe your present teaching activities.

[22] **A:** I teach four different courses at Carnegie Mellon. One is
[23] on intellectual capital. One is on e-commerce technology,
[24] which is a survey of all the technologies that we believe
[25] pertain to electronic commerce. I teach a course in

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[1] electronic payment systems which are the technologies
[2] surrounding how one pays for things on the Internet, and a
[3] course in Internet law and regulation.

[4] **Q:** Do you lecture in these areas as well?

[5] **A:** I have a very extensive lecturing schedule largely
[6] organized by Carnegie Mellon University. In addition to the
[7] four courses I teach, I give approximately 400 outside
[8] lectures per year, mostly to corporations that want to become
[9] educated in the Internet.

[10] **Q:** Which major U.S. corporations do you presently lecture for
[11] and where do you do that lecturing?

[12] **A:** The major clients for that are Morgan Stanley Dean Witter
[13] where I teach in New York and London. I'm scheduled to also
[14] teach in Chicago and San Francisco for MacKenzie & Company. I
[15] have been asked to give Internet training to all 6,000 of
[16] their consultants worldwide, so I have been doing that in a
[17] variety of countries, Austria, France, the UK, United States.

[18] **Q:** Are those lectures extended and do they address the issues
[19] including bandwidth file transfer, web architecture,
[20] compression, networking, Internet technology that are at issue
[21] in this case?

[22] **A:** They do, because they are fundamental topics in e-commerce
[23] technology. Basically the outside lecturing I do are very
[24] short and compressed summaries of the courses that I teach at
[25] Carnegie Mellon.

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[1] **Q:** Can you describe your scholarly output?

[2] **A:** Yes. Of course when I became an assistant professor
[3] originally at Carnegie Mellon University there was the
[4] obligation of publication, so I have something like 18
[5] publications largely in the field of computational geometry
[6] which I invented myself while at Yale University. Subsequent
[7] to that I was on leave from the university for 17 years during
[8] which I had virtually no scholarly output.

[9] Upon returning to the university and becoming
[10] involved principally in Internet activities, the time lag
[11] between when one writes a paper and when it appears in print
[12] is so long that the Internet has substantially changed by that
[13] time, so the vast bulk of my scholarly output now consists of
[14] maintaining the technology portion of the CMU Institute for
[15] E-Commerce's website which contains freshly updated
[16] information and links to hundreds and hundreds of sites
[17] dealing with e-commerce technology. And my scholarly output
[18] of course is also the lectures that I give and accompanying
[19] slides.

[20] **Q:** Let me show you what has been marked as Plaintiffs'
[21] Exhibit 129 —

[22] **MR. HERNSTADT:** May we have a copy, please?

[23] **MR. SIMS:** Yes.

[24] **Q:** — and ask you whether this is the declaration you
[25] submitted earlier in this case and with particular reference

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[1] now a copy of your CV?

[2] **A:** It is my declaration and it is a copy of my CV.

[3] **Q:** Is the CV complete and up to date?

[4] **A:** The CV is not complete. It's accurate as far as it goes,
[5] but it's what I refer to as my short r sum . It concentrates
[6] principally on my major output and major invited talks. I
[7] haven't listed everything that I have done.

[8] **Q:** Have you testified in any court cases?

[9] **A:** Yes, I have.

[10] **Q:** Which ones that have any reference to computer matters?

[11] **A:** I testified I believe approximately on six to eight cases
[12] involving computer matters, and I testified in one case
[13] involving Internet matters.

[14] **Q:** What is that?

[15] **A:** That was the "I Crave TV" case that was decided earlier
[16] this year, January, February.

[17] **Q:** Were you qualified as an expert in that case?

[18] **A:** Yes, I was.

[19] **Q:** By what court?

[20] **A:** That was the Western District of Pennsylvania.

[21] **Q:** Do you recall what subject you were qualified as an expert
[22] in?

[23] **A:** Yes, it was Internet technology, networking, transmission
[24] of video over the Internet.

[25] **Q:** Are you being compensated for your engagement here?

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[1] **A:** Could you repeat the question?
[2] **Q:** Are you being compensated for your engagement by
[3] plaintiffs?
[4] **A:** I certainly hope so.
[5] **Q:** How do the rates you are charging compare to the rates you
[6] do charge for consulting work for Morgan Stanley and
[7] MacKenzie?
[8] **A:** For expert witnessing I charge approximately one third of
[9] what I do for teaching to industrial corporations.
[10] **MR. SIMS:** This is the point at which I would have
[11] tendered the witness as an expert.
[12] **THE COURT:** Ask your next question.
[13] **MR. SIMS:** Thank you, your Honor.
[14] **Q:** Are you familiar, Dr. Shamos, with the term CSS?
[15] **A:** Yes.
[16] **Q:** What does CSS stand for?
[17] **A:** It stands for Contents Scrambling System.
[18] **Q:** What is your understanding of what CSS is?
[19] **A:** CSS is an access control and copy protection mechanism
[20] that's utilized to control access to and the copying of
[21] copyrighted works that appear on DVDs.
[22] **Q:** What is your understanding of what CSS does?
[23] **A:** Well, CSS is a comprehensive scheme that involves
[24] contractual relations, hardware and computer software. What
[25] CSS on the hardware level does is enables a licensee of the

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[1] system to put copyrighted material on a disk so that it is in
[2] scrambled form and cannot be descrambled unless one knows the
[3] secret.
[4] **Q:** In what kind of DVD players can authorized disks be
[5] played?
[6] **A:** Well, authorized disks are supposed to be able to be
[7] played only in what are referred to as compliant players,
[8] players manufactured by licensees of CSS.
[9] **Q:** And what kind of disks will authorized players play?
[10] **A:** Well, to my knowledge authorized players play compliant
[11] disks.
[12] **Q:** Should they play other disks?
[13] **A:** I believe it's a requirement, a licensing requirement that
[14] they be constructed to not play unlicensed disks.
[15] **Q:** Do you know what DeCSS is?
[16] **A:** Yes.
[17] **Q:** What does it do?
[18] **A:** DeCSS is a computer program that circumvents the
[19] protections on the CSS DVD.
[20] **Q:** Were you asked by plaintiff's counsel in this case to
[21] perform any studies or tests?
[22] **A:** Yes, I was.
[23] **Q:** Would you describe for the Court briefly what you were
[24] asked to do.
[25] **A:** Yes. The request was extremely specific. I was asked to

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[1] go out and purchase a brand new computer that had no prior
[2] software. We were asked to go out and purchase brand new DVDs
[3] from a store in their sealed packages. We were asked to
[4] obtain —
[5] **MR. HERNSTADT:** I might as well make the objection
[6] now. Everything that he is telling you as "we" is for the
[7] most part at least as set forth in his declaration "he," and
[8] he is his assistant Eric Burns. So I would object to any of
[9] the testimony that Dr. Shamos is going to present that was not
[10] performed by him, and that includes almost all of the
[11] experiments, and that also includes things like how long the
[12] process took. We could go through it on a piece by piece
[13] basis, but I would like to make the initial part of the
[14] objection known.
[15] I don't think Dr. Shamos should be permitted to
[16] testify about any of this stuff until we have had an
[17] opportunity to depose Mr. Burns, because Mr. Burns conducted
[18] most of the experiment.
[19] **THE COURT:** I take it that the bottom line of all of
[20] this, Mr. Sims, is that you are going to ask for some opinion
[21] from Dr. Shamos.
[22] **MR. SIMS:** Absolutely. And Dr. Shamos was asked to
[23] conduct it, and he did conduct it, and he had the help of his
[24] assistant Mr. Burns. And I am quite confident in the courts
[25] of this country when experts testify as to studies that they

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[1] have been responsible for, they sometimes have assistants who
[2] have performed some of that work under their supervision.
[3] **THE COURT:** Rule 703 I believe of the Federal Rules
[4] of Evidence provides that the facts or data in a case upon
[5] which an expert bases an opinion or an inference may be those
[6] known to him or made known to him. If they are of a type
[7] reasonably relied upon by experts in the field in forming
[8] opinions or inferences on the subject, the data need not be
[9] admissible in evidence. It need not be, in other words,
[10] firsthand knowledge, it can be hearsay.
[11] With this broad level of generality, Mr. HERNSTADT, I
[12] can't sustain your objection because I don't yet know what
[13] foundation is going to be offered. So your objection is
[14] overruled for now and we will see what kind of foundation
[15] there is.
[16] **MR. HERNSTADT:** Thank you.
[17] **Q:** Dr. Shamos, I think you were in the course of describing
[18] what you were asked to do, and I think it might be helpful
[19] just to go through it, because I'm not sure exactly where you
[20] left off.
[21] **A:** Right. It was to obtain a brand new computer capable of
[22] reading authorized DVDs, obtain a copy of some authorized
[23] DVDs, obtain a copy of DeCSS through defendant's website,
[24] attempt to use DeCSS to descramble one or more of the DVDs;
[25] having done that, attempt to rip the result into DivX, attempt

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[1] to find other DiVXs on the Internet, trade those with whoever
[2] might make them available and then conduct studies to
[3] determine how long it would take to transfer DVDs and DiVXs
[4] over networks and the Internet.

[5] **Q:** Did you perform all of this work yourself?

[6] **A:** No.

[7] **MR. HERNSTADT:** I'm going to renew the objection. Of
[8] that list of things, first of all this was an experiment
[9] solicited by the Proskauer firm. They were asked to do those
[10] particular things, they did that. Dr. Shamos was not present
[11] for the study of how long it took to transfer the DiVX. He
[12] was not present for finding other DiVXs. He has never used an
[13] IRC channel on his own. He didn't know that that's where you
[14] are supposed to go, or at least he testified that his
[15] assistant told him that's where you have to trade this stuff.

[16] He also was informed by his assistant how to find —
[17] well, I guess he could have found the DiVX anyway, but the
[18] assistant performed the entire DiVX rip. He observed, he
[19] testified, for some of it. He watched his assistant do this
[20] stuff. In terms of the time, his assistant told him how long
[21] it took. In very general terms his assistant did not keep any
[22] records, and he doesn't even know — there is an upload and a
[23] download at the same time. He doesn't know whether one took
[24] longer than the other or how long it actually took. There is
[25] no evidence of any of this.

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[1] **THE COURT:** One thing I know for sure is I don't know
[2] any of it because I haven't heard the evidence yet.

[3] **MR. SIMS:** The objection, your Honor, is premature.

[4] **THE COURT:** Yes, it's premature.

[5] **Q:** Dr. Shamos, I think I had asked you whether you performed
[6] other work yourself, and you were about to provide an answer.

[7] **THE COURT:** Before he answers, let me just make a
[8] request to you both. It's no secret to you I'm getting
[9] realtime transcripts, that is, I'm seeing a draft of the words
[10] almost as soon as they are spoken. It is perfectly obvious to
[11] me that this is going to be essentially useless, and your
[12] transcript in this case will be essentially useless, with all
[13] due respect to my very able court reporters, if you people
[14] don't give them a glossary by tomorrow, not an explanation of
[15] what the terms mean but simply a list of the terms. Because I
[16] can't imagine that they are doing anything but trying to do
[17] things like phonetically render on a stenotype machine DiVX,
[18] and you guys know what that is, and I at least know that it is
[19] an acronym or an abbreviation, and I know what the letters
[20] are, but they don't have a clue.

[21] **MR. SIMS:** I appreciate that. At five of nine we put
[22] that on our to-do list this morning, and we will have that
[23] later today or no later than first thing in the morning.

[24] **THE COURT:** Now, Dr. Shamos, please answer the
[25] question if you remember.

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[1] **THE WITNESS:** I think the question was did I do
[2] everything myself, and the answer is no, and I think of course
[3] not.

[4] When the CEO of a corporation reports his company's
[5] earnings, he doesn't add up the numbers personally himself.
[6] So, I engaged an assistant whose name is Eric Burns. Eric
[7] Burns has been working with me for two and a half years. He
[8] works on the Universal Library project where his principal
[9] responsibility is the creation of videos and installing videos
[10] in the Universal Library. I have worked with him very
[11] extensively, and I have come to rely on both his knowledge and
[12] his truthfulness.

[13] Furthermore, the materials that he provided to me
[14] were not simply his own words but various pieces of physical
[15] evidence that I am able to examine in order to determine
[16] whether I thought there was anything wrong with what he was
[17] saying. Furthermore, all of the actions that were performed
[18] here were done under my supervision or direction, with the
[19] exception of some activities that took place while I was on
[20] vacation for 12 days.

[21] **Q:** Do computer scientists and professors such as yourself
[22] customarily rely on intelligent, experienced, brilliant
[23] computer students for some of their research and work?

[24] **A:** Yes.

[25] **Q:** What is your opinion of Mr. Burn's intellectual

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[1] qualifications as a computer scientist?

[2] **A:** They were the reason I asked him to assist me in this
[3] project.

[4] **Q:** Now, I would like you to take us through the steps from
[5] the beginning that you used in your study, and we have some
[6] charts here that may be helpful as we work through it.

[7] In connection with the first part of your test to see
[8] if you could obtain DeCSS.

[9] **THE COURT:** Who is the gentlemen who just came inside
[10] the well?

[11] **MR. SIMS:** Mr. Hart, one of my partners.

[12] **MR. HERNSTADT:** Your Honor, we have never seen these
[13] charts.

[14] **MR. SIMS:** Yes, you have. They are exhibits and I
[15] believe you have them.

[16] **MR. HERNSTADT:** What exhibits are they?

[17] **MR. HART:** Starting with 105.

[18] **MR. SIMS:** Your Honor, may I have Mr. Hart help me
[19] with the charts?

[20] **THE COURT:** You may certainly.

[21] **Q:** In connection with the first part of your testimony to see
[22] if you could obtain DeCSS from the defendant's site and
[23] descramble one of plaintiff's films, did you begin by buying a
[24] new computer?

[25] **A:** Yes, we went out to — both Eric and I went out to Comp

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[1] USA in Parkway Center Mall in Pittsburgh, and we needed to
[2] find a machine that day that would be capable of playing DVDs,
[3] so we bought a high-end Sony laptop.

[4] **Q:** For the purposes of your research and experiment here,
[5] what was the purpose of buying a new laptop?

[6] **A:** We wanted to avoid any suggestion that there were rogue
[7] pieces of software or things that we had created that had been
[8] lingering on the disk. We wanted to make sure there was
[9] absolutely nothing on this machine except the operating system
[10] and software that we specifically downloaded to the machine as
[11] noted in my declaration.

[12] **Q:** Is it a typical consumer computer?

[13] **A:** I'm not sure I would refer to it as a typical consumer
[14] computer. It's a laptop for one thing, and typically
[15] consumers have home PCs. And at the laptop end, it's fairly
[16] at the high end, although it costs significantly less these
[17] days than a home desktop used to cost.

[18] **Q:** How does its functionality compare to those that many
[19] Americans would have either at the university or if they were
[20] in high school and in an upper middle class community?

[21] **A:** In terms of its processor capability, it's about at the
[22] middle range of what one gets in desktops now, but it is at
[23] the high end of what one gets in laptops. It was a 650
[24] megahertz machine. In terms of its disk storage it had 18
[25] gigabytes of disk, which is large for a laptop but not large

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[1] for a desktop as currently sold now.

[2] **Q:** Did you proceed to try to decrypt the CSS-scrambled movie
[3] using DeCSS?

[4] **A:** We did.

[5] **Q:** Where did you get DeCSS?

[6] **A:** Okay. First, we purchased a copy of Sleepless in Seattle
[7] from the same store that we purchased the laptop from. We
[8] then came back, and I think if we look at Exhibit 105 —

[9] **THE COURT:** Are you sure it wasn't Sleepless in
[10] Hollywood?

[11] **THE WITNESS:** We were sleepless actually during a lot
[12] of this experiment.

[13] **A:** So, we went to defendant's website, 2600.com.

[14] **Q:** Is Exhibit 105 connected somehow to defendant's website?

[15] **A:** Yes, I should explain that most of these exhibits on these
[16] charts are going to be what are referred to as screen shots.
[17] Screen shots are basically capturing in static form exactly
[18] what was being displayed on the screen of the laptop at the
[19] time that these actions were taken. So, they are the
[20] equivalent of having stood there and photographed the screen.

[21] So, one can see from a line — and I am pointing with
[22] this laser pointer to some of that. I will try to keep it out
[23] of your eyes — up here is a line that says address.

[24] An address indicates the domain name of the website
[25] that we are visiting, in general the URL, the specific

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[1] resource that we were asking to be downloaded to the screen.

[2] And this is the home page of defendant's website.

[3] **MR. SIMS:** Your Honor, are the books sufficient for
[4] your use, or would you like to be handed a loose copy of the
[5] exhibit?

[6] **THE COURT:** No, I don't need a loose copy if they are
[7] in the books.

[8] **MR. SIMS:** We will move in, needless to say, the
[9] paper ones.

[10] **THE COURT:** I'm sorry?

[11] **MR. SIMS:** You already have those. I don't need to
[12] give the witness the paper one because he has the chart.

[13] **THE COURT:** If he can see it.

[14] **THE WITNESS:** Yes, I can.

[15] Then I think in the next exhibit, one has to scroll
[16] down a little bit from the top of the home page.

[17] **THE COURT:** Mr. Sims, are you offering 105?

[18] **MR. SIMS:** I was going to offer them in a group.

[19] **THE COURT:** That's fine. What is the next one? 106?

[20] **MR. SIMS:** 106.

[21] **Q:** What does 106 show?

[22] **MR. HART:** I have 107.

[23] **THE COURT:** Let's do 106.

[24] **Q:** What does Exhibit 106 show?

[25] **A:** This one, because of the small size of the text, I would

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[1] appreciate having a paper copy.

[2] **THE COURT:** Let's make this a little easier. I have
[3] been provided with an extra copy of these exhibits. Why don't
[4] you take them down there, Dr. Shamos, and they are all tabbed
[5] and can you use them. I take it that's the same as the other
[6] set?

[7] **MR. SIMS:** It is, absolutely. For awhile anyway.

[8] **Q:** What is Exhibit 106?

[9] **A:** Exhibit 106 shows more of the home page of defendant's
[10] website, what happens when one scrolls down further in the
[11] site.

[12] In this section "how you can help: While we have
[13] every intention of sticking this out to the end" — I believe
[14] "this" refers to this litigation — "we have to face the
[15] possibility that we could be forced into submission. For that
[16] reason it's especially important that as many of you as
[17] possible, all throughout the world, take a stand and mirror
[18] these files." Where "these files" are shown in red and
[19] underlined on the page, that indicates a hyperlink, which if
[20] one clicks with a mouse one will get to these files. These
[21] files are indicated I think in the next exhibit.

[22] **Q:** And did you click on the hyperlink to these files?

[23] **A:** We did.

[24] **Q:** Turn to Exhibit 107, if you would.

[25] What is the list of things here, and what is

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[1] represented by the purple color in the middle?

[2] **A:** Yes, Exhibit 107 shows the result of clicking on “these

[3] files” on Exhibit 106, and one is presented with a long list

[4] of places. We didn’t visit every one of them but presumably

[5] because of what is stated in the web page each of these is

[6] some place where one can obtain DeCSS from.

[7] We clicked on an

[8] “HTTP://home.rmci.net/bert-fuckthelawyers”

[9] If your Honor would excuse me for the necessity to

[10] use such terminology in the courtroom, but it is evidence.

[11] So we clicked on that link and we are taken to a site

[12] which I think is shown in Exhibit 108.

[13] **Q:** And is this the page you obtained by clicking on the

[14] purple line in Exhibit 107?

[15] **A:** Yes, it is. In fact if one looks up at the address line,

[16] again at the top of the browser it shows that the page being

[17] viewed is precisely the page that was referred to on the

[18] previous exhibit.

[19] **Q:** So, that if we look at the browser line on Exhibit 107,

[20] the address is still at the defendant’s website, 2600.com?

[21] **A:** Yes, it shows that and it shows the specific file that was

[22] being displayed on the browser at that moment.

[23] **Q:** And then the very next screen you obtained has transferred

[24] you to another website obtainable through the defendant.

[25] **A:** That’s correct.

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[1] **Q:** What does Exhibit 108 show?

[2] **THE COURT:** You say “obtainable through the

[3] defendant.” I take it you are not meaning to suggest by that

[4] that Exhibit 108 is on the defendant’s site. Rather, it’s a

[5] site that you get through clicking, is that right?

[6] **THE WITNESS:** Precisely. The page shown on Exhibit

[7] 108 is not at the defendant’s website. It’s at bert’s

[8] website.

[9] **Q:** And what else does Exhibit 108 show of relevance to your

[10] experiment?

[11] **A:** Well, this is a way to obtain DeCSS, because it says this

[12] is simply a mirror of the files necessary to decrypt the copy

[13] protection built into DVD players. Mirror refers to a site

[14] that essentially contains an identical copy of material found

[15] on another website. It’s common to mirror materials, either

[16] whole web sites or portions of websites.

[17] The first entry where it says DeCSS.zip says this is

[18] the utility used to rip the .VOB files off DVDs to be copied

[19] to your hard drive.

[20] Now, copying to a hard drive is something that

[21] compliant DVD players are not allowed to do, because once the

[22] materials are copied to the hard drive they can be freely

[23] played, freely edited, freely distributed. So, DeCSS.zip

[24] refers to a program or refers to data that has been compressed

[25] with a program called Zip, which is commonly used on the

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[1] Internet to reduce the size of files to speed up their

[2] transfer.

[3] And it’s all arranged so that when you click on this

[4] link, this DeCSS.zip link, that an automatic procedure is

[5] invoked that causes the file to be downloaded to your own

[6] computer.

[7] (Continued on next page)

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[1] **Q:** And was that done?

[2] **A:** That’s what we did; yes. We clicked on that link. That’s

[3] why it shows up in purple, as opposed to being in blue.

[4] **Q:** Let me show you Exhibit 109 and ask whether that is what

[5] you obtained after clicking on DeCSS.zip?

[6] **A:** Yes. This is a — what’s shown here I think is probably

[7] not the entire screen at the time. This is a blowup of just

[8] the file download window that got opened automatically when

[9] the DeCSS.zip link was clicked that invokes a utility under

[10] Windows that informs the user he has asked to have a file.

[11] Downloaded and the system wants to know whether the file

[12] should just be opened directly from the web site or saved to

[13] the user’s own hard disk.

[14] We clicked that to save this file to disk. As you

[15] can see from the dot inside the radio button where it says

[16] “save this file to disk” and then we clicked “O.K.”

[17] **Q:** What came on the screen next?

[18] **A:** I think it’s Exhibit 110.

[19] Actually, it’s likely that we were asked to give a

[20] file name for the file that we were going to save and I think

[21] that’s not shown in the screen shot here.

[22] **Q:** What does Exhibit 110 show?

[23] **A:** Exhibit 110 is a screen shot that was captured during the

[24] actual download of DeCSS.zip from the lawyer’s web site and

[25] what it shows is that after we had transferred 38.3 kilobytes,

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[1] only one second estimated remained, and that we had copied
[2] already more than half of the file. So, it took about two
[3] seconds to do that download.
[4] **Q:** To download DeCSS altogether?
[5] **A:** Yes. Once having selected, we wanted to start the
[6] download, the actual download took about two seconds.
[7] **MR. SIMS:** Your Honor, I would offer Exhibit 129,
[8] which is Dr. Shamos' CV together with Exhibits 105 to 110.
[9] **MR. GARBUS:** No objection.
[10] **THE COURT:** Received.
[11] (Defendant's Exhibits 105 through 110 received in
[12] evidence)
[13] **Q:** Did you and your assistant then proceed to use the DeCSS
[14] that you had obtained by a link through defendant's web site?
[15] **A:** Yes, we did. The first thing, of course, we had to do was
[16] unzip it, so we had to run winzip in order to expand the
[17] DeCSS.zip file to something called DeCSS.exe — DeCSS.
[18] When I say "dot," I mean the "period" character.
[19] **Q:** And do you know how long that took?
[20] **A:** The unzipping?
[21] **Q:** And to find the utility?
[22] **A:** Well, yes. We had now advanced from a web site called
[23] FM4, what utilities we were going to need to do all of the
[24] things we were going to do. So, I stated in my declaration,
[25] we obtained off the Internet three pieces of required software

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[1] to do.
[2] **Q:** And what were those pieces of software?
[3] **A:** One of them was winzip, which we knew what was going to be
[4] required to decompress files. Another was called FTP207. FTP
[5] stands for "file transfer protocol." That software that's
[6] used for transfer filings over the Internet.
[7] Then mIRC 3.71 is a piece of software for engaging in
[8] Internet relay chat. That's a procedure whereby multiple
[9] people and also two people on the Internet can basically talk
[10] to one another, not through voice, but by typing at their
[11] terminals. When one person types, the other person sees what
[12] that person is typing.
[13] **Q:** Are these pieces of software which many computer users
[14] would already have on their computer?
[15] **MR. GARBUS:** Pardon me. I object to the question.
[16] **THE COURT:** Overruled.
[17] **A:** Not only would many users already have them, but they are
[18] freely available over the Internet.
[19] **Q:** How did you use DeCSS with Sleepless in Seattle?
[20] **A:** Well, we inserted it into the DVD drive —
[21] **Q:** I'm sorry?
[22] **A:** We inserted the Sleepless in Seattle DVD into the DVD
[23] drive of the laptop and we invoked DeCSS.exe.
[24] **Q:** How long did that process take?
[25] **A:** Well, the invocation was very fast, but we have to go

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[1] through the actual process of descrambling the DVD and the
[2] entire process for doing all of this from start to when we
[3] finished took about 45 minutes, but the actual processing time
[4] to do the descrambling is in the range of 20 to 30 minutes.
[5] **Q:** That is from the moment you applied the DeCSS to Sleepless
[6] in Seattle, the descrambling time was?
[7] **A:** That was in the range of 20 to 30 minutes. It was a
[8] computationally-intensive process.
[9] **Q:** And what was the result that you obtained from applying
[10] DeCSS to a store-bought copy of Sleepless in Seattle?
[11] **A:** Yes, I think we have — I guess we don't have exhibits
[12] here. Well, the result of DeCSS'ing is what are called VOB
[13] files, video object files, that are playable through the
[14] laptop. And so, we obtained a file of Sleepless in Seattle.
[15] The first time we did it, it wasn't complete because
[16] the complete VOB file, I believe, is 4.3 gigabytes and we
[17] couldn't get the system to create a file larger than four
[18] gigabits. But we had a perfectly playable file and we played
[19] it and it was the equivalent to the DVD of the movie Sleepless
[20] in Seattle.
[21] **Q:** And how did you know that the computer was at that point
[22] playing the DeCSS'd version of the store-bought copy rather
[23] than the DVD that you had put into the hard drive?
[24] **A:** Oh, because to demonstrate that we specifically removed
[25] the DVD from the DVD disk itself of Sleepless in Seattle from

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[1] the DVD drive so the thing could only have been playing from a
[2] file that was on the hard disk.
[3] **Q:** Now, are there ways to make the file you obtained, that
[4] is, the file of Sleepless in Seattle resulting from the
[5] application of DeCSS, are there ways to make that file small?
[6] **A:** Well, not directly by itself, O.K. There are two kinds of
[7] ways of making a file smaller. One is referred to as loss
[8] less compression. The other is referred to as lossy L-O-S-S-Y
[9] compression.
[10] In loss less compression, enough information is
[11] stored about the data so that it can be reconstructed exactly
[12] bit for bit. It is not a failing to attempt to do loss less
[13] compression on a VOB file, essentially one can't compress it
[14] any further.
[15] There are, however, ways of compressing the file in
[16] the lossy manner so that it can become much smaller. And
[17] smaller files are better as long as the visual acuity doesn't
[18] suffer because they can be transferred to people faster and
[19] more of them can be put on the same media or like DVD's or
[20] CD-Roms.
[21] **Q:** In your experience, does doing so require a high degree of
[22] expertise?
[23] **A:** When you say "doing so," you mean the process of going —
[24] of performing a lossy compression on a VOB file?
[25] **Q:** That's correct.

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[1] A: It requires some degree of expertise. Fortunately, all of
[2] that expertise can be acquired through instructional tutorials
[3] on the Internet, which is how we did it.
[4] Q: And from where did you get the information that told you
[5] how to proceed to compress the DeCSS file you had obtained?
[6] A: There's a web site called FM4.org that provides that
[7] information.
[8] Q: Let me put on the chart stand Exhibit 112 and ask you to
[9] explain what that is.
[10] A: Well, 112 is the home page of FM4.org, as one can
[11] determine by again looking at the address line shown in the
[12] browser and it says, welcome to FM4.org, free MPEG4. That's
[13] F-R-E-E-M-P-E-G-4 as one word — is a group created to provide
[14] you with the best quality new and classic movies encoded with
[15] MPEG4 technology.
[16] You can join the channels #DiVX point is the number
[17] sign character like a music sharp sign — you can join the
[18] channels #DiVX and point free MPEG4 on the EFNET, IRC network
[19] to visit us.
[20] And then down further at the bottom of the page under
[21] the news entry, May 1, 2000, it says, "Big thanks to BCKSPACE
[22] for letting me rape his DiVX tutorial."
[23] And that DiVX tutorial is a something like that link
[24] where one can find out about how to make DiVX's, but because
[25] FM4 was able to raise it, it was necessary to go to back

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[1] spaces web site. It could be obtained directly from FM4.org.
[2] Q: Did you and your assistant click on the FM4 tutorial?
[3] A: Yes.
[4] Q: And let me show you Exhibit 113 and ask what that —
[5] A: Yes, 113 is the page on the FM4.org web site that contains
[6] the tutorial as is fairly clear from again looking at the
[7] address line on the browser which shows that it's the FM4.org
[8] page named tutorial or it's in the directory tutorial. It's
[9] probably default at html or something in, but it's in the
[10] tutorial directory.
[11] And what this explains is this tutorial will take you
[12] through the process of creating your own DiVX movies step by
[13] step, credit for the content of this tutorial should go to
[14] backspace E for creating the original and allowing me unFKN
[15] real — I don't want to pronounce that as it's intended to be
[16] pronounced to modify for FM4. And there are — then there are
[17] five steps listed that one must go through in order to produce
[18] a DiVX from a decrypted DVD.
[19] Q: And will you read what it says in step 1?
[20] A: Step 1: DVD-extraction/decryption: There's a hyperlink
[21] DeCSS. It says, to decrypt the *.VOB files on the DVD and
[22] copy them to hard disk.
[23] Q: And you had already done that?
[24] A: We had already obtained DeCSS and done that.
[25] MR. GARBUS: I object.

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[1] It seems to me at some point we get into questions of
[2] material off the Internet and whether or not that material is
[3] or is not hearsay and it seems to me that's a start that we
[4] will start to get into and this information is getting from
[5] some outside source. And he's presenting it, I presume, for
[6] the truth of it.
[7] THE COURT: As I understand it, he is presenting it
[8] to explain what he did.
[9] MR. GARBUS: I presume — I understand he's doing it
[10] for the purpose of the truth of it.
[11] MR. SIMS: Only for the truth of what he did.
[12] THE COURT: The bottom line is that he is saying that
[13] he followed these steps and the result was that he, I assume,
[14] had himself a decrypted DiVX movie so he — it's sort of like
[15] a policeman testifying that there was a call over the radio
[16] that says there was a holdup at Broadway and 118th Street and
[17] he ran as far up Broadway and 118th Street, and lo and behold,
[18] there was somebody holding a gun on somebody.
[19] And certainly the radio call is not admitted for the
[20] truth of the purpose. It's offered to explain why the
[21] policeman went to 118th and Broadway and happened to find the
[22] robbery. I think this is the same thing; is it not?
[23] MR. GARBUS: I don't think, and I can barely read
[24] these exhibits with the copies that I have. I think it talks
[25] about other people having done other things and other people

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[1] having downloaded films.
[2] THE COURT: Yes, look I take it Mr. Himself you're
[3] not offering any of that for the truth.
[4] MR. SIMS: Absolutely not.
[5] MR. GARBUS: Thank you.
[6] THE COURT: To that extent, sustained.
[7] MR. GARBUS: Thank you.
[8] Q: Dr. Shamos, what did you do since you had already
[9] performed, you and your assistant, the part of this of getting
[10] DeCSS, what did you do next?
[11] A: We performed all the remaining steps 2 through 5 on
[12] Sleepless in Seattle.
[13] Q: And are those reflected in the next series of exhibits
[14] that you provided?
[15] A: They are.
[16] Q: Turn then if you would to Exhibit 114B.
[17] THE COURT: Is this B or D?
[18] MR. SIMS: 114B.
[19] THE COURT: "B" as in boy?
[20] MR. SIMS: We skipped over "A" for a moment.
[21] A: Well, step 1 is DVD ripping the right way and the advice
[22] given on FM4 down in the second paragraph. It says, to start,
[23] run DeCSS and starting with the first one going file select,
[24] the files to decode from the first to the last file in the
[25] series.

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[1] So, the result of running DeCSS is it produces a
[2] bunch of files that one can select from those that one wants
[3] to make a DiVX of. And we chose the as shown by the screen
[4] down there, it tells you how to make that selection.
[5] **Q:** And the ones that are purple on the bottom right, are
[6] those the files that you chose — selected?
[7] **A:** Yes.
[8] **Q:** What did you do next?
[9] **A:** Well, we followed step 2.
[10] **Q:** 114, please.
[11] What does Exhibit 114C show?
[12] **A:** 114 is an example that shows how to extract the video
[13] portion of the DeCSS to DVD. Of course a video has both video
[14] information and audio information and it's necessary in this
[15] procedure to extract the video information separately, the
[16] audio information separately, and then merge them together and
[17] attempt to synchronize them to result in a DiVX that will
[18] actually make sense when it's played so that the speech of the
[19] actors is properly synchronized with their emotion.
[20] **Q:** And to what extent does the FM4 tutorial lead you through
[21] that process?
[22] **A:** Well, completely. I mean, we followed every step in here
[23] to the letter.
[24] **Q:** So, you undertook the video extraction as shown on 114C?
[25] **A:** Yes.

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[1] **Q:** And then, what did you do?
[2] **A:** We went to step 3.
[3] **Q:** Will you put up 114D.
[4] What does Exhibit 114D show?
[5] **A:** O.K., Exhibit 114D is step 3 in which one having already
[6] extracted the video now must go and extract the audio from the
[7] DeCSS DVD and this explains how to do that.
[8] **Q:** What was the next step?
[9] **A:** The next step was step 4.
[10] **MR. SIMS:** 114E, please.
[11] **A:** That's correct. And they refer to this as multiplexing
[12] which is basically the process of merging the audio and video
[13] together, it says, so now you have an AVI file that has only
[14] video and an enormous WAV file. What do you do? And then
[15] this shows you what to do in order to merge the two to create
[16] a result that's supposed to have some semblance of
[17] synchronization.
[18] **Q:** Was there any further step you needed to undertake?
[19] **A:** Yes, the result of this produced what I would — what I
[20] believe are referred to in the declaration as a horribly
[21] desynchronized DiVX in which the sound was not occurring at
[22] the same time as the action in the movie.
[23] **Q:** And did FM4 explain how to solve that problem?
[24] **A:** Yes, to some extent. There is another —
[25] **Q:** Will you put up 114A.

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[1] Is there an explanation of how to address the
[2] desynchronizing problem on 114A?
[3] **A:** Yes, a little bit more than halfway down the page, it
[4] says, fixing the desynch. If your video audio does start out
[5] synced, but gradually becomes desynched, you can skip this
[6] step, etc.
[7] What was necessary to do in our case at that time was
[8] do a lot of fiddling around with the — with the audio and
[9] video portions in order to get them synchronized properly.
[10] This required eliminating the opening trailer of the
[11] movie because the opening trailer is recorded at a different
[12] frame rate than the movie itself and the process assumes that
[13] either one or the other of those speeds is going to be used
[14] all the way through. And so by eliminating the opening
[15] trailer, we were eventually able to get the DiVX properly
[16] synchronized.
[17] **Q:** By "opening trailer," do you mean an advertising for the
[18] film?
[19] **A:** The opening trailer typically contains previews of other
[20] films and anything that the video company wants you to see
[21] before you see the movie.
[22] **Q:** So that the first time that you and your assistant went
[23] through this process, how long did it take you altogether to
[24] end up with a DiVX'd — that's DiVX'd?
[25] **MR. GARBUS:** Are you through?

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[1] **MR. SIMS:** No.
[2] **Q:** — with a DiVX'd copy of Sleepless in Seattle on the hard
[3] drive obtained through DeCSS?
[4] **MR. GARBUS:** Your Honor, I understand when this was
[5] done, Mr. Shamos was not there.
[6] **THE WITNESS:** The understanding is not quite correct.
[7] I was not there at the moment of completion of the process.
[8] **Q:** Were you there?
[9] **A:** I was present at various times during the process.
[10] **Q:** And where is your office in relationship to your
[11] assistant's office?
[12] **A:** It's two offices away, approximately 20 feet.
[13] **Q:** What was — so, the first time you went through it, you
[14] and your assistant weren't through it, how long did the
[15] process take?
[16] **A:** The first time we were complete novices and the whole
[17] thing took about 20 hours.
[18] **Q:** And much of that was related to the desynchronizing issue that
[19] came up?
[20] **A:** Yes.
[21] **Q:** And have you undertaken with Mr. Burns to do it
[22] subsequently?
[23] **A:** We have done various experiments. We believe that we can
[24] now do it in about 10 hours.
[25] **Q:** What was the end result of the DiVX process?

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[1] A: The end result was a DiVX'd version of Sleepless in
[2] Seattle that was substantially smaller than the original by a
[3] factor of I recall something like 5.6.
[4] THE COURT: 5.6, what, gigabytes?
[5] THE WITNESS: No, it was smaller than 20 percent of
[6] the size of the original file. It — the size had been
[7] reduced by a factor of 5.6, so it came down to something over
[8] 700 megabytes.
[9] THE COURT: So, what I want to be clear on is what
[10] the two comparisons are. Is the starting comparison, that is,
[11] the precompression file the file that you had after you ran
[12] DeCSS on the DVD?
[13] THE WITNESS: Yes, I'll make it — I will be very
[14] specific with the numbers. The video object file, the .VOB
[15] file that we obtained by DeCSS Sleepless in Seattle was 4.3
[16] gigabytes. After we completed the DiVX process, it was down
[17] to 750 megabytes.
[18] Q: That's a ratio of about 5.67?
[19] A: Yes.
[20] Q: Now, have you —
[21] THE COURT: How much of that compression was
[22] attributable to the elimination of the trailer?
[23] THE WITNESS: I think the trailer lasts something
[24] like three minutes and the movie lasts close to two hours.
[25] It's just a tiny — tiny percentage.

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[1] Q: And have you and your assistant been able to obtain DiVX
[2] copies of DeCSS films in the size of around 650 megabytes?
[3] A: Yes, we have by playing with the compression ratio, if you
[4] increase the compression ratio higher than 5.67, then you can
[5] get it down to and the objective of all of this is to get it
[6] down so that it fit on one CD-ROM and CD players and CD-ROM
[7] recorders are readily available through computer stores, so we
[8] fiddled through it to get it down.
[9] MR. GARBUS: My understanding is this was done
[10] without this witness' knowledge and while he was in Hawaii.
[11] It was not done at his direction. It was not part of this
[12] experiment. It was not part of the — done under his
[13] supervision.
[14] THE WITNESS: Nevertheless, I did see the result and
[15] I have no reason to disbelieve my assistant of two and a half
[16] years.
[17] THE COURT: Go ahead, Mr. Sims. This is a matter of
[18] cross-examination, Counsel.
[19] Q: Does DiVX work directly on CSS encrypted DVD movies?
[20] A: I'm sorry. Could you repeat —
[21] Q: Can you obtain an intelligible perceptually useful version
[22] of a film if you apply DiVX to a store-bought DVD?
[23] MR. GARBUS: I object to the form of the question.
[24] THE COURT: I don't understand the question.
[25] Sustained.

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[1] Q: Dr. Shamos, if you attempted to attempt to compress
[2] Sleepless in Seattle as you bought it directly from the store
[3] having — would it be possible to compress the store-bought
[4] version encrypted of Sleepless in Seattle?
[5] A: If we did not attempt to do so.
[6] Q: Would it be possible?
[7] A: If we tried to do so, I don't know if the tools available
[8] to us would even do the processing, but if it did the
[9] processing, garbage would result because there would be no way
[10] to decrypt or descramble the material on the DVD.
[11] THE COURT: It would be useful at this point, Dr.
[12] Shamos, for you to place what the DiVX acronym or whatever it
[13] is means and what precisely it is.
[14] THE WITNESS: Certainly. There are a number of
[15] compression technologies that are used on video. The whole
[16] idea is that visual information on a computer requires a huge
[17] amount of storage space because each individual little square
[18] on the screen. What we refer as pixels, information must be
[19] stored about the brightness of the pixel and exactly what the
[20] color composition of the pixel is.
[21] And in order to achieve high resolution images, a
[22] tremendous number of pixels are required, therefore, the size
[23] of the single frame in the video is large. What this results
[24] in is unless compression is performed, an entire video takes
[25] up so much digital storage space that there is no medium on

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[1] which it can be delivered.
[2] We don't have that technology right now at any
[3] affordable price, so it's always necessary to compress the
[4] videos. And there is an organization called the Motion
[5] Picture Experts Group, MPEG, which has been doing studies for
[6] a long time on how one can compress video in such a way that
[7] even though it is lossy, none of the — or very little of the
[8] visual quality is lost to the human being.
[9] And this is done by a process called perceptual
[10] encoding. Cognitive psychologists have studied the human
[11] visual system and they know the ways in which the human eye is
[12] sensitive to certain things.
[13] For example, the human eye is insensitive to small,
[14] slow changes in color, but it is extremely sensitive to
[15] changes in contrast. That's what enables us to pick out edges
[16] of objects.
[17] So, in perceptual encoding, which is used in MPEG,
[18] that information from the video stream is eliminated that a
[19] human being cannot see. Therefore, if you can't see it, even
[20] though there's less information there, it still looks as good.
[21] MR. GARBUS: Your Honor, so far as I know, this
[22] witness has never written on MPEG, has never testified with
[23] respect to MPEG and is not an expert on MPEG, which is a very
[24] different area than the other areas we've been going through.
[25] THE WITNESS: I lecture 50 times a year on

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[1] compression technologies.

[2] **THE COURT:** I'm going to hear the attorney. If you
[3] have other testimony on this subject, I will hear yours as
[4] well.

[5] And, Dr. Shamos, we will do better here if you don't
[6] argue with Mr. Garbus.

[7] **THE WITNESS:** I'm sorry, your Honor.

[8] **Q:** Dr. Shamos, once the movie has been subject to DeCSS —

[9] **A:** I hadn't completed the answer.

[10] **Q:** I'm sorry. Excuse me.

[11] **A:** And so, DVDs are compressed — the video stream from the
[12] original Hollywood movie, in order to create a DVD of it is
[13] compressed using a format called MPEG2 which came from the
[14] Motion Picture Experts Group.

[15] There are subsequent compression technologies which
[16] achieve a higher degree of compression, in particular MPEG4,
[17] which is an encoding that has the encoder for which has
[18] apparently been stolen and is not referred to as DiVX in the
[19] underground world.

[20] **Q:** Once a movie on a DVD has been subjected to DeCSS and then
[21] compressed through the use of DiVX'd, does it take the 20
[22] hours or the 10 hours that your assistant eventually got it
[23] down to to be able to — does the process that took either 20
[24] hours or 10 hours have to be gone through again?

[25] **A:** No. That one could think of that as sunken costs, sort of

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[1] like the cost of actually producing the movie in Hollywood in
[2] the first place. Once that's done and copies of it exists,
[3] copies could be readily distributed around.

[4] **Q:** Is it possible for you to demonstrate here today the
[5] respective perceptual quality of the store-bought DVD as
[6] compared with the version that you obtained through the
[7] experiment you just have been testifying about?

[8] **A:** Yes, it is. My assistant, Eric Burns, is here and he's
[9] prepared to operate the very laptop that we used to do all of
[10] this and show it on the screen in the courtroom.

[11] **THE COURT:** Before we do that, we are going to take a
[12] recess for about 15 minutes.

[13] (Recess)

[14] **THE COURT:** Just to be clear, folks, we are going to
[15] continue to use the jury box for you, only so long as there
[16] are too many people to fit if the back. You will have to move
[17] if space opens up.

[18] But let's go ahead.

[19] **MR. SIMS:** Thank you, your Honor.

[20] DIRECT EXAMINATION Continued

[21] BY MR. SIMS:

[22] **Q:** I think, Dr. Shamos, I was about to ask or I did ask,
[23] where you could demonstrate the prospective perceptual quality
[24] of the store-bought Sleepless in Seattle to use a different
[25] example and the DiVX'd DeCSS version that you obtained through

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[1] your experiment. This is Eric Burns, your assistant?

[2] **A:** That's correct.

[3] **MR. SIMS:** And, your Honor, if we might — if we
[4] might, we would like to show first the — a minute or so of
[5] the authorized DVD and then the DiVX'd DeCSS version. Mr.
[6] Burns has been handed a store-bought copy. I showed
[7] it to Mr. Hernstadt and asked if I had his permission, which
[8] he graciously gave for us to break the seal while the break
[9] was taking place so we could move things along.

[10] **THE COURT:** Mr. Garbus?

[11] **MR. GARBUS:** I would object. What they're doing is
[12] they are showing it on a particular instrument that is not the
[13] kind of computer screen that people allegedly look at these
[14] when they are downloaded. So, the relationship of how you see
[15] it here has nothing, nothing, to do with how it would look on
[16] a computer screen.

[17] They can, if they want to make this demonstration,
[18] bring in a large computer screen, but this is not that. You
[19] will not see what a person will see on a computer and there's
[20] absolutely no reason why they haven't brought in a large
[21] computer other than to mislead the Court as to what you see
[22] when you see a downloaded film.

[23] **THE COURT:** Well, I assume that you will address
[24] those questions to the witness on cross and you will hear the
[25] witness' testimony about what, if any, difference there is

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[1] between this screen and any other screen, and if you then want
[2] to produce a witness to testify that a different screen would
[3] produce a different result, you can do that. And if you want
[4] to bring in a different screen and have the thing played for
[5] me, you can do that as well.

[6] **MR. GARBUS:** As you know, just to keep clear the
[7] issues between us, we had no foreknowledge of this. This was
[8] never discussed at his testimony that such an exhibit was
[9] going to — such a demonstration was going to be made, that we
[10] met Mr. Shamos the first time on Saturday.

[11] As of now, I don't even have, I don't think, though
[12] some people in my office may have his full deposition
[13] transcript, if we are to make arrangements either to get to
[14] cross-examination concerning this exhibit or the chance to
[15] show what a viewer of a personal computer would see.

[16] At an appropriate time, I would request a continuance
[17] so that we could do that.

[18] **THE COURT:** Go ahead, Mr. Sims.

[19] **MR. SIMS:** Thank you, your Honor.

[20] And by the way, Mr. Burns has in front of him the
[21] Sony computer that the experiment was performed on.

[22] **THE COURT:** I really would prefer to hear the
[23] evidence from the witnesses on the stand, not from the
[24] lawyers, either you or Mr. Garbus.

[25] **MR. SIMS:** I would just invite your Honor to look at

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[1] that screen during the demonstration, if you would like to.
[2] **Q:** Dr. Shamos, can you with your assistant show us first what
[3] a minute or so of the store-bought version looks like.
[4] **THE COURT:** Well, just a minute. Would that obviate
[5] your problem, Mr. Garbus, if I looked at the laptop here
[6] rather than that screen?
[7] **THE WITNESS:** If it may assist the Court.
[8] **THE COURT:** No, please just a minute.
[9] **MR. GARBUS:** I think it would help.
[10] **THE COURT:** All right. I will do that.
[11] **THE WITNESS:** The only issue, your Honor, is we can't
[12] show it on both screens at the same time.
[13] **THE COURT:** We will show it here.
[14] **THE WITNESS:** It's one or the other. In order to do
[15] that, it is simply necessary to insert the authorized
[16] Sleepless in Seattle DVD into the DVD drive and it will
[17] automatically begin playing. Then in order to do the
[18] comparison with the DiVX'd that we made, it would be necessary
[19] to skip directly to the film itself, as opposed to watching
[20] the whole opening trailer.
[21] (Video played)
[22] **MR. SIMS:** There's the opening trailer. And Eric
[23] will stop the video and then skip directly to the movie. And
[24] full screen it.
[25] **Q:** Dr. Shamos, is there a difference in perceptual quality

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[1] depending on who is doing the laptop screening?
[2] **A:** It's very popular with a laptop to be directly on axis, to
[3] be perpendicular to the screen and hopefully in the center of
[4] the screen, which would not be necessary with a TV set.
[5] **Q:** Dr. Shamos, can you see the screen and narrate what it is?
[6] **A:** I could do it if I came down there, but.
[7] **THE COURT:** Come on down.
[8] **A:** Well, this is the opening scene of Sleepless in Seattle
[9] and I think we are going to look at this until just about the
[10] opening credits begin to see a variety of different kinds of
[11] scenes.
[12] This is a long shot. Then we are going to take a
[13] closeup of human faces and some exceptional detailing in the
[14] movie, which is achievable with DVD.
[15] **Q:** If you would, as we go along just point out the qualities
[16] of the picture that you think are worth pointing out.
[17] **THE COURT:** Let's not turn up the sound.
[18] **A:** Later on, we can see the shrubbery in the background is
[19] shown. There's a high degree of details with the flowers back
[20] here and for, if it's in focus, which that is, this is not the
[21] highly detailed also with the shrubbery.
[22] Then there's a point in this scene where a reflection
[23] appears in the glass over there of exceptionally high detail.
[24] In general, because of the DVD quality, everything is of a
[25] high degree of sharpness.

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[1] **THE COURT:** Have we seen enough of this one?
[2] **THE WITNESS:** I think that's sufficient.
[3] **Q:** Now, Dr. Shamos, can you have Eric copy by the way of
[4] Sleepless of Seattle is Exhibit 2? Can you have him play the
[5] version of Sleepless in Seattle that came through the DeCSS?
[6] **A:** Wait. Please remove the authorized DVD from the drive.
[7] Take it out, and put it off to the side.
[8] **THE COURT:** The record will reflect that it has been
[9] removed.
[10] **A:** And leave the DVD open and please place the DiVX'd file
[11] that we created.
[12] It is possible that upon close examination to find
[13] certain effects in here that are referred to as artifacts
[14] which are differences between the DVD quality and the DiVX'd
[15] quality. I'll try to point out some of them, although it's
[16] extremely difficult to find them.
[17] We've conducted numerous lay experiments in which we
[18] asked people to come in the room and tell whether or not this
[19] was a DVD or DiVX.
[20] **THE COURT:** That's obviously hearsay.
[21] **THE WITNESS:** Eric, if you see any artifacts that I'm
[22] missing, please point them out.
[23] **MR. HERNSTADT:** We object.
[24] **THE COURT:** No, sustained. Objection sustained.
[25] The flowers look substantially identical from the way

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[1] they looked on the DVD. And we can look again at the
[2] reflection in the glass that I pointed out earlier. It's the
[3] same.
[4] **A:** That reflection is substantially the same. I thought I
[5] spotted a couple of artifacts in the back area. This wall
[6] should be a constant texture and color. There's some tiny
[7] changes where a little bit red showed up and it was time
[8] varying. So, there was something obviously wrong because the
[9] wall itself was not changing or moving during that time.
[10] In general, one can look at large areas of constant
[11] color and see motion where there shouldn't be motion and I'm
[12] not seeing that right now, but that did happen with the wall
[13] behind a little bit earlier.
[14] **THE COURT:** O.K. You may go back to the witness
[15] stand. Thank you, Dr. Shamos.
[16] (The witness resumes the stand)
[17] **BY MR. SIMS:**
[18] **Q:** Dr. Shamos, do you have an opinion as to the quality
[19] available to viewers in terms of perceptual quality of the
[20] DiVX'd DeCSS version as compared to the store-bought version?
[21] **MR. GARBUS:** Your Honor, I'm going to object.
[22] It seems to me that this is certainly not within the
[23] area of his expertise.
[24] **THE COURT:** I'm going to receive it for what it's
[25] worth, but I understand your point, Mr. Garbus. It's really a

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[1] question for me to decide anyway, I think to the extent it's
[2] material.

[3] **A:** There are many different compression ratios one might
[4] choose in order to make a DiVX. So, I don't think it's
[5] possible to make a general statement that DiVX is comparable
[6] in quality or not comparable in quality to a DVD.

[7] What I think we've just demonstrated and it's not my
[8] opinion, but anybody, including the Court, who observed it
[9] that at this compression ratio, 5.67 on this movie, that the
[10] quality of the DiVX was nearly indistinguishable from the DVD
[11] except possibly to an expert.

[12] **MR. SIMS:** Your Honor, I would like to offer Exhibits
[13] 112, 113, 114B, 114C, 114D, 114E, 114A, 2, and 111; 111 being
[14] the — I believe being the Sleepless in Seattle DiVX DeCSS
[15] version.

[16] **THE COURT:** Well in what form does that manifest
[17] itself?

[18] **MR. HART:** We've burned that to CD-ROM.

[19] **THE COURT:** Where is it?

[20] **MR. SIMS:** Eric, do you have this — I'm sorry.

[21] **MR. GARBUS:** Your Honor, I presume since I don't know
[22] how that was made that we could save that for
[23] cross-examination, so I can reserve my right, and with respect
[24] to the other documents that are going in, I've previously made
[25] an objection, which I believe the Court has sustained with

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[1] respect to that which is hearsay, so that subject to that
[2] continuing objection, the documents I will permit them to go
[3] in.

[4] **THE COURT:** Well, the others are the screen shots;
[5] right?

[6] **MR. GARBUS:** I thought 112 was going in.

[7] **THE COURT:** Right, these are screen shots.

[8] **MR. GARBUS:** Which has information on it.

[9] **THE COURT:** I'm just trying to find out what they
[10] are.

[11] **MR. SIMS:** They are, your Honor, for example, the FM4
[12] materials and as you've indicated and it was certainly our
[13] intention they're offered, not for the truth of particular
[14] statements therein, but as the — they provided the
[15] instructions that Dr. Shamos followed.

[16] **THE COURT:** I understand. So, Plaintiff's 112, 113
[17] and 114A through E and 2 are received.

[18] (Plaintiff's Exhibits 112, 113, 114A through 114E,
[19] and 2 received in evidence)

[20] **THE COURT:** I'm going to reserve on 111.

[21] 112 to 114A are received subject to the same
[22] limitation as before and I take it fundamentally, Mr. Garbus,
[23] the point here is if maybe in a better analogy, if somebody
[24] tells you the combination to the vault at Chase Manhattan,
[25] your repetition of that doesn't prove that's the combination

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[1] to the vault. Your testimony that somebody gave it to you,
[2] you went there, you tried the combination and the vault
[3] opened, that's evidence.

[4] **MR. GARBUS:** I agree, your Honor. Thank you.
[5] (Continued on next page)
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BY MR. SIMS:

[1] **Q:** Dr. Shamos, by the way, how was the content of the
[2] Sleepless in Seattle on Exhibit 111 placed onto that CD-ROM?

[3] **A:** Yes, Eric went out yesterday and purchased a CD-ROM
[4] burner, an external CD-ROM burner that could be attached to
[5] the Sony laptop. We have the burner with us here in court
[6] today. He connected it and I was present during the process
[7] as the CD-ROM was burned with the DiVX box.

[8] **MR. GARBUS:** Can we at the lunch break examine both
[9] the CD-ROM and the burner that was utilized to make this?

[10] **THE COURT:** I take it there is no objection.

[11] **MR. SIMS:** No objection.

[12] **THE COURT:** Certainly.

[13] **MR. GARBUS:** And of course the exhibit itself.

[14] **Q:** Now, Dr. Shamos, let me move to a related subject which is
[15] the electronic transfer of movies that have been obtained by
[16] the process you have testified to over the last hour or so.

[17] First, did you attempt to obtain DiVX motion pictures
[18] from other websites?
[19]

[20] **A:** We did.

[21] **Q:** What did you do?

[22] **A:** I had Eric go on internet relay chat into the chat room
[23] pound detective investigation, which is recommended by FM4.org
[24] as a source of DiVX investigation.

[25] **Q:** What is Internet relay chat?

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[1] **A:** That's a program and facility that allows people on the
[2] Internet to communicate via the keyboard with one another.
[3] **MR. GARBUS:** I guess I have a continuing objection to
[4] things that this witness did not do but that other people did,
[5] even if Mr. Burns is his assistant.
[6] **THE COURT:** Before I know what the point of the
[7] testimony is, I don't know whether it's appropriate under 703,
[8] I don't know whether it's being offered for the truth and to
[9] what extent, and so it's really very difficult for me to deal
[10] with this in the abstract. If we get to a specific point on
[11] which you want to make a point, feel free to make it, but I
[12] can't do it in the abstract.
[13] **MR. GARBUS:** Thank you.
[14] **THE WITNESS:** If there is a pending question, I need
[15] it repeated.
[16] **Q:** No, I'm getting a new question. Thank you. What led you
[17] to decide to try to obtain a DiVX'd motion picture off the
[18] internet?
[19] **A:** Well, that is what Mr. Hart asked, whether we could
[20] successfully do that.
[21] **Q:** And what did you ask your assistant, if anything, to do to
[22] obtain such a film?
[23] **A:** Go on internet relay chat and try to find somebody who
[24] would be willing to furnish us with a DiVX.
[25] **Q:** And did he do so?

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[1] **A:** Yes.
[2] **Q:** Did he do so under your supervision?
[3] **A:** He did so under my direction. I was not present for the
[4] entire Internet relay chat session.
[5] **Q:** How do you know that he obtained a motion picture that had
[6] been DiVX'd as a result of his engaging in the Internet relay
[7] chat?
[8] **A:** Yes, because a log was made of the Internet relay chat,
[9] which is one of our exhibits, and I have no reason to believe
[10] that that log was fabricated. And it resulted in the transfer
[11] of DiVXs in both directions between us and the person who was
[12] willing to supply a DiVX.
[13] **Q:** Let me show you what has been marked as Exhibit 115A.
[14] **MR. SIMS:** Your Honor, in the book there are two
[15] pages. We are only offering one, and I am handing the
[16] reporter and the witness that.
[17] **THE COURT:** Mr. Garbus?
[18] **MR. GARBUS:** I would just like to see that exhibit.
[19] I think as I understand this now, it's more
[20] appropriate for cross.
[21] **THE COURT:** All right. Thank you.
[22] **Q:** Could you identify 115A, please.
[23] **A:** Yes, 115A is a print-out of the log of the Internet relay
[24] chat session in which we obtained the movie the Matrix from
[25] another individual on the Internet.

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[1] **Q:** I want to point out a few aspects of 115A and ask you to
[2] identify what they indicate to you.
[3] **A:** Yes.
[4] **Q:** First, there is a session start. What does that reflect?
[5] **A:** Okay. What happens is on Internet relay chat one goes
[6] into a chat room where many people can read and see on their
[7] screen what people are doing and what people are typing.
[8] **MR. GARBUS:** I don't want to persist in the
[9] objections. I understand this witness's testimony, he didn't
[10] do this, he didn't do the Internet chat, his expert did it.
[11] So far as I know from his deposition, this witness has never
[12] been on the Internet chat room.
[13] **MR. SIMS:** Your Honor, right now I have the witness
[14] explaining what a session log of an Internet chat session
[15] looks like. I believe he is qualified.
[16] **THE COURT:** If he is qualified to do that.
[17] **Q:** Dr. Shamos, what is the time on the top line signal?
[18] **THE COURT:** Look, let me ask this before that.
[19] What's the basis of your knowledge about Internet relay chat
[20] and what session start and the other indications on this page
[21] is?
[22] **THE WITNESS:** In my courses I teach various Internet
[23] protocols. Internet relay chat is one I teach. I'm not a
[24] regular user of Internet relay chat myself.
[25] **THE COURT:** All right. Overruled. Go ahead.

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[1] **Q:** What does the session start time reflect?
[2] **A:** Let me explain how it works. Initially when one goes into
[3] a chat room, that gives many people on the Internet the
[4] ability to simultaneously communicate with one another.
[5] Once two of them decide they would like to continue
[6] an interaction privately, that's what "session start"
[7] indicates. So, the session started when my assistant Eric,
[8] whose name for the purposes of this chat is VaioBoy, engaged
[9] with someone named air row sell, AEROSOL, after having
[10] previously found air sole through the public chat. So session
[11] start with whether the two of them get down to by and are
[12] going to discuss exchanging DiVXs.
[13] **Q:** And VaioBoy refers to the name of the computer that you
[14] and your assistant had purchased?
[15] **A:** Well, he had to make up a name or a handle for himself,
[16] and since he was on the Sony Vaio computer, he called himself
[17] VaioBoy.
[18] **Q:** Who is eaRoSoL?
[19] **A:** I don't know. EaRoSoL is an individual who was in the
[20] chat room who offered to exchange DiVX with us.
[21] **Q:** The person communicating with eaRoSoL as indicated on this
[22] page the handle changes from VaioBoy to VaioKid some way
[23] through this page. Can you explain what that indicates?
[24] **A:** Yes, that's correct. Approximately one third of the way
[25] down the page there is a change in handle from VaioBoy to

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[1] VaioKid, but there is no overt indication of that other than
[2] the fact that the name changes.
[3] What happened there is that the two of them had to
[4] make an agreement as to how the transfer was going to occur,
[5] and at the time Eric was using a wireless card in his
[6] computer. The wireless card didn't provide sufficient
[7] bandwidth, so he wanted to change over to a land Ethernet
[8] line, and so he had to disconnect out of the chat room. When
[9] he reconnected, the Internet relay chat didn't recognize that
[10] he had left, and when he attempted to use the same name again,
[11] it instead defaulted to his default name which was VaioKid,
[12] which is what he specified originally at the beginning of the
[13] chat session.
[14] You specify a primary name and a secondary name. It
[15] automatically defaulted to VaioKid. He didn't have to do
[16] anything explicit in order to make that happen. But VaioBoy
[17] and VaioKid are the same person here, they are both Eric.
[18] Q: Is the work that Mr. Burns did in terms of participating
[19] in this chat and his record to you the sort of thing that
[20] computer science professors and teachers and consultants such
[21] as you are would rely on and do rely on?
[22] A: Well, I can explain the basis for my reliance.
[23] MR. GARBUS: It's a bit leading. I object.
[24] THE COURT: As to leading, it's overruled. But I
[25] think that it's still kind of out there in space in terms of

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[1] bringing to bear on anything specific here —
[2] MR. SIMS: I will.
[3] THE COURT: — or for what purpose.
[4] Q: Would you explain the basis of your reliance?
[5] THE COURT: Start by telling us what you relied on it
[6] for.
[7] THE WITNESS: I rely on it as being an accurate
[8] transcript of what went on between Eric and eaRoSoL, and I
[9] also look at the language of it and the kind of information
[10] that is being exchanged, the various numbers that are in there
[11] and the fact that at the end of it a DiVX of the Matrix, which
[12] we previously did not have and never acquired from any other
[13] place, existed on the hard drive.
[14] MR. SIMS: The purpose of this, your Honor, is just
[15] to show that the film —
[16] THE COURT: I understand. It's chain of custody
[17] evidence in the electronic era.
[18] MR. SIMS: Exactly. Thank you, your Honor.
[19] Q: Is the chat log accurate and complete?
[20] A: Well, the chat log is accurate and the chat log is
[21] complete as it records the beginning of the private session
[22] between eaRoSoL and VaioBoy.
[23] Q: Was there part of the conversation that is not reflected
[24] on 115A?
[25] A: There is not part of the conversation between the two of

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[1] them. The part of the conversation in which Eric located
[2] eaRoSoL took place over a period of about 20 minutes prior to
[3] this in which he had to find somebody who was willing to
[4] exchange a DiVX with him. That's not here.
[5] Q: Why is it that the session log maintained on the computer
[6] omits that portion?
[7] A: Well, this is a log feature of Internet relay chat. It
[8] records this log separate.
[9] Q: And what was the line preceding what is represented here
[10] which led eaRoSoL to participate in the conversation, which
[11] prompted eaRoSoL to participate in a conversation?
[12] A: Yes. In my declaration, since the dialog appears to begin
[13] in the middle of nowhere, with this person eaRoSoL suddenly
[14] showing up and saying, sure, etc., it appears to be in
[15] response to a question. I thought that for counsel and the
[16] Court, that log itself would be confusing, so I asked Eric
[17] what was the line immediately preceding the initiation of the
[18] private chat that would lead eaRoSoL to say "sure." And that
[19] line was "Anyone have any DiVXs to trade for Sleepless in
[20] Seattle?"
[21] THE COURT: Well, how do you know that?
[22] THE WITNESS: I only know it because Eric told me.
[23] THE COURT: All right. Well, I think there it is
[24] offered for the truth, and if there is an objection, it's
[25] sustained.

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[1] MR. HERNSTADT: There is an objection.
[2] THE COURT: Sustained.
[3] MR. SIMS: If I may, subject to tying it up, I will
[4] put Mr. Burns on the stand for the purposes of asking that
[5] question.
[6] THE COURT: I have an even better suggestion. Over
[7] the lunch break, why don't you, Mr. Hernstadt and Mr. Garbus
[8] see if you can't agree that if called he would give that piece
[9] of testimony.
[10] MR. SIMS: Thank you, your Honor.
[11] MR. GARBUS: You should know that we had asked over
[12] the weekend to depose him. We had also insisted that he be in
[13] court today, and we would like to take an opportunity to
[14] depose him.
[15] THE COURT: He is here. I am going to deal with that
[16] later. Discovery is over in this case, but maybe there are
[17] special grounds to permit it. I will hear that at the end of
[18] the day.
[19] Go ahead, Mr. Sims.
[20] Q: Did you and your assistant Mr. Burns proceed to download
[21] the Matrix from eaRoSoL?
[22] A: Yes, as reflected by the log, what happens here is they
[23] are making an agreement on what kind of equipment they are
[24] going to use, what kind of connection they are going to have
[25] and what is going to be traded for what, so this is an even

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[1] Steven exchange in which we give up a Sleepless in Seattle and
[2] we receive a Matrix in return.

[3] **Q:** Do you know how long it took your assistant to download
[4] Matrix from eaRoSoL?

[5] **A:** Yes, it took six hours approximately.

[6] **THE COURT:** How do you know that?

[7] **THE WITNESS:** I know it in two ways. He has told me
[8] it, but also I was in my office during the time of the
[9] transfer and was regularly coming into his office saying how
[10] is it going, how is it going, and sometime somewhat more than
[11] six hours after it began I went in and it was finished.

[12] **THE COURT:** All right. On the second basis?

[13] **MR. GARBUS:** I object to it.

[14] **Q:** Do you know what the technical parameters of the
[15] connection were?

[16] **A:** Yes.

[17] **Q:** What were they?

[18] **THE COURT:** Let me just back up. Did you observe the
[19] download begin?

[20] **THE WITNESS:** No.

[21] **THE COURT:** Did you observe it end?

[22] **THE WITNESS:** No.

[23] **THE COURT:** So whatever you are telling me about how
[24] long it took is what your colleague told you, is that right?

[25] **THE WITNESS:** No, it can't be any longer than what

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[1] I'm testifying to, because I observed before it began and I
[2] observed after it ended, and that period was approximately in
[3] the range of six hours.

[4] **THE COURT:** Mr. Garbus?

[5] **THE WITNESS:** It could have been less. It couldn't
[6] have been more.

[7] **MR. GARBUS:** If there is a log, I would like to see
[8] it. I object to the testimony. He wasn't there.

[9] **THE COURT:** Well, it seems to me that based on what
[10] the witness has just said he has a basis in personal knowledge
[11] at least for the purpose of admissibility for testifying that
[12] it didn't take more than six hours. I do not accept because
[13] of the hearsay rule his testimony about what Mr. Burns told
[14] him. That's the ruling.

[15] **MR. GARBUS:** Thank you.

[16] **A:** So, the technical parameters here were that we believe
[17] that eaRoSoL was in the State of Connecticut and had a cable
[18] modem connection. The reason for that is the IP address
[19] listed for him here going to —

[20] **THE COURT:** Mr. Garbus, excuse me. Mr. Garbus?

[21] **MR. GARBUS:** Objection.

[22] **THE COURT:** Sustained. That answer is stricken. I
[23] don't even think it was responsive to a question. Mr. Sims?

[24] **Q:** Do you have any information or way to calculate the
[25] technical parameters of eaRoSoL's connection?

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[1] **A:** Well, we better be specific about what technical
[2] parameters we are talking about. If you are talking about the
[3] bandwidth available to eaRoSoL, then we can only surmise. If
[4] you're talking about the actual bit rate that was achieved
[5] during the transfer, that's easy to measure because we know
[6] how many bits were transferred and how long it took to do
[7] that.

[8] **Q:** What was the effective bandwidth of the transfer of the
[9] Matrix from eaRoSoL?

[10] **A:** We were getting about 250 kilobits per second. The way
[11] you calculate that is to take the size of the file that was
[12] transferred, divide by the number of seconds in six hours.

[13] **MR. GARBUS:** Your Honor, I suppose we could save it
[14] for cross-examination, but there are so many variables with
[15] respect to that answer, namely what time of day this happened,
[16] what were the various media, what time did the upload start.

[17] **THE COURT:** I think you should save it for cross. I
[18] appreciate your being helpful on this point, but I'm well
[19] aware a lot of things affect transfer rates.

[20] **Q:** Dr. Shamos, you testified that you knew from your personal
[21] presence in the room at various points that the transfer of
[22] the film took approximately six hours, that is, transfer of
[23] the Matrix.

[24] **A:** Yes.

[25] **Q:** Was anything else being transferred on that line at the

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[1] same time?

[2] **A:** There was a simultaneous transfer in both directions. We
[3] were transferring Sleepless in Seattle up to aeRoSoL, and
[4] eaRoSoL was transferring the Matrix down to us simultaneously.

[5] **Q:** And within that six hour period were both films
[6] transmitted?

[7] **A:** Yes.

[8] **Q:** What is the Internet connection that your assistant had
[9] during the transfer?

[10] **MR. GARBUS:** If I may, with respect to both films
[11] being transmitted I presume that comes from information from
[12] Mr. Burns.

[13] **THE WITNESS:** No, that comes from my observation
[14] after having entered the room after Mr. Burns was finished.

[15] **THE COURT:** Go ahead.

[16] **Q:** What Internet connection did your assistant have during
[17] this transfer and how do you know that?

[18] **A:** He was in his office with this machine connected to CMU's
[19] 100 megabit switch network. The limiting factor in this
[20] transfer obviously —

[21] **MR. GARBUS:** I object. That is not the Internet
[22] connection.

[23] **THE COURT:** Look, Mr. Garbus, I understand that's
[24] your cross-examination point, but it isn't an objection. It's
[25] not a ground for objection. If a witness says that I observed

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[1] someone transfer heroin, it is not a proper objection to say
[2] no, he didn't.
[3] **Q:** Dr. Shamos, can you perform a demonstration similar to the
[4] one that was done a few moments ago of the authorized store
[5] bought DVD copy of the Matrix with the DiVX copy that you and
[6] your assistant testified to downloaded from eaRoSoL?
[7] **A:** Yes, in exactly the same manner. It will start with an
[8] authorized DVD of the Matrix and show a scene that is
[9] completely different in nature from the scenes in Sleepless in
[10] Seattle. The quality of DiVXing depends on various factors
[11] including the original scene that is being transferred. So,
[12] for example, scenes that have a high degree of action are
[13] difficult to compress because the scene is changing so
[14] quickly. And the Matrix in distinction to Sleepless in
[15] Seattle has a lot of very fast action, bullets flying and
[16] rotary blades, so we will take a look at that one.
[17] **Q:** I am going to hand up Exhibit 115D and ask you if you know
[18] what this is.
[19] **A:** Yes, 115D is a CD-ROM that was burned again using the
[20] CD-ROM burner attached to the same Sony laptop, and it
[21] contains the DiVX of the Matrix that we obtained from eaRoSoL.
[22] **Q:** Were you in the room yesterday when that burning took
[23] place?
[24] **A:** Yes, I was.
[25] **MR. SIMS:** And I am going to hand to Mr. Burns, if I

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[1] might, Exhibit 2.34. It's one of the DVDs in Exhibit 2, a
[2] store bought copy with a cellophane wrapper of Matrix.
[3] **THE COURT:** 2.34?
[4] **MR. SIMS:** Well, Exhibit 2 is on the Exhibit list,
[5] and there were a number of DVDs and we will supply you with —
[6] **THE COURT:** What was the Exhibit 2 that I already
[7] admitted without any qualification?
[8] **MR. HART:** Sleepless in Seattle.
[9] **MR. SIMS:** I will supply that, your Honor.
[10] **THE COURT:** Let's get that straightened out at the
[11] lunch break.
[12] **MR. GARBUS:** Here again the burned CD I will have a
[13] chance to look at it over the lunch break, and the burner.
[14] **THE COURT:** Yes, of course. We will take a brief
[15] comfort break. Five minutes.
[16] (Recess)
[17] **THE COURT:** Just for your guidance, we are going to
[18] break for lunch at 12:15 and resume at 2 to give you a little
[19] more time, Mr. Garbus, to examine the disks, so I will be in a
[20] position to file the opinion by 2 o'clock.
[21] **MR. GARBUS:** I should say also, your Honor, with
[22] respect to the disks, I think we got them this morning. I
[23] don't know. We will take a look at it. It's absolutely clear
[24] to me that we will probably need some time.
[25] **MR. HERNSTADT:** The disks that you were given are

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[1] different than the disks that we were given. They were burned
[2] at a different time, so we would like to compare them all.
[3] That's all.
[4] **THE COURT:** All right. You will have that
[5] opportunity.
[6] **MR. HERNSTADT:** Thank you, Judge.
[7] **THE COURT:** All right, Mr. Sims.
[8] **BY MR. SIMS:**
[9] **Q:** Dr. Shamos, could you and your assistant perform a
[10] comparison of the exhibit of the Matrix that has just been
[11] marked as an exhibit, the store bought copy of the Matrix that
[12] has been marked, so that the Court can look at that and then
[13] look at the DiVX copy of the Matrix obtained from eaRoSoL.
[14] **A:** Yes, we can do that the same way we did Sleepless in
[15] Seattle if we go down to the laptop.
[16] **MR. SIMS:** With the judge's permission, we will
[17] surround the Sony computer and you can narrate.
[18] **THE COURT:** If there is going to be a lot more of
[19] this — this is it? Because I was going to suggest you agree
[20] on a monitor so we don't have to rearrange the courtroom.
[21] **MR. SIMS:** We have set that one up so it will read
[22] like a TV screen.
[23] **THE WITNESS:** What is happening now is Eric has
[24] inserted the film the Matrix, the authorized DVD of the Matrix
[25] into the DVD drive.

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[1] **THE COURT:** That's Exhibit 2.34, as I understand it,
[2] right?
[3] **MR. GARBUS:** Your Honor, if you want, given the fact
[4] that we have already been through this process once, if it
[5] makes it easier to now look at it off the screen.
[6] **THE COURT:** If that's okay with you, we will do it
[7] that way. This exhibit is 2.34. That's the store bought copy
[8] of the Matrix. We are going to mark the disk itself before
[9] the day is out.
[10] And I take it, counsel, just for my guidance, if I
[11] take these disks and I stick them in the disk drive in my home
[12] computer which I got from mail order just like everybody else,
[13] they should play, right, and I can look at them on my own
[14] screen.
[15] **MR. SIMS:** I'm going to ask Dr. Shamos to answer that
[16] question.
[17] **THE WITNESS:** They will play if you have a compliant
[18] player.
[19] **THE COURT:** Well, I have no idea.
[20] **MR. SIMS:** We have some computer experts here.
[21] For the record, the copy of Sleepless in Seattle
[22] which is store bought is 2.28. There is in your binder a
[23] photocopy of the cover.
[24] **THE COURT:** 2.38?
[25] **MR. SIMS:** 2.28. Sleepless in Seattle.

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[1] **THE COURT:** Okay. Thank you. So the record will
[2] reflect that it is 2.28 that I received earlier, not 2.
[3] Proceed.

[4] **BY MR. SIMS:**

[5] **Q:** Mr. Burns, I notice that you have broken the seal on the
[6] store bought copy of the Matrix and put it into the hard
[7] drive. Dr. Shamos, would you continue the demonstration.

[8] **A:** Yes. Please start it by just closing the CD-ROM door.

[9] Now, we have chosen a portion of the movie that's
[10] particularly difficult to compress, one that has a lot of
[11] action and scene changes. So, if you would go to, when it
[12] starts, to the chapter that we have decided to display,
[13] although we are perfectly prepared to display any portion of
[14] the movie —

[15] **THE COURT:** I am going to come down anyway, because
[16] my eyes aren't that good.

[17] **A:** What will happen is there is not only a lot of action but
[18] numerous special effects are also taking place.

[19] **THE COURT:** Lower the sound, please.
[20] (DVD played)

[21] **Q:** Dr. Shamos, when you want it switched over, just tell me.

[22] **A:** I think that's enough.

[23] Now, if you could attempt to find the same place in
[24] the DiVX that was obtained from eaRoSoL and play that, please.
[25] I am going to attempt to point out to the Court the DiVXs

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[1] artifacts that I see in the frame. There are some. There are
[2] more than there are in Sleepless in Seattle.

[3] **Q:** Eric, will you take the DVD out — let the record reflect
[4] that the DVD was removed and that the DVD door is open.

[5] **THE COURT:** It so reflects.

[6] Would you pause it? Pause it, please.

[7] **MR. GARBUS:** Even a third suggestion, even if it's
[8] possible, if we can watch it here and there at the same time.
[9] Is that possible? If that's possible, then you could see the
[10] difference between the two technologies.

[11] **THE COURT:** It's one or the other right now?

[12] **MR. HART:** Yes.

[13] **MR. GARBUS:** Is there a way of setting it up so you
[14] can watch both simultaneously?

[15] **THE COURT:** Let me ask you this. I was serious about
[16] the question I asked before. Does anybody have any objection
[17] to my looking at these two things on my own home computer and,
[18] if not, is there any reason to suppose that that will produce
[19] an appropriate conclusion, whatever it is?

[20] **MR. GARBUS:** Can we think about it?

[21] **MR. SIMS:** It will take us a moment to find the right
[22] spot.

[23] (DVD played)

[24] **A:** In looking around for artifacts, I am looking for any
[25] large flat areas of the screen where things are changing that

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[1] should not be changing. It would be difficult here to see the
[2] rain spilling down on the walls. However, there are some
[3] places where you can see some things.

[4] It's possible that a real videophile would be able to
[5] see the real artifacts, but I haven't been able to see them.

[6] **MR. GARBUS:** It seems to me, since I am familiar with
[7] the Matrix and I looked at this one, I can clearly see the
[8] differences without — and it seems to me it would be
[9] appropriate for the Court at some time to look at the store
[10] bought and then look at this DiVX one, and then I think the
[11] Court can see the difference between the two at the same time.

[12] I don't know how the Court now looking at this and
[13] see the difference in the shadows and the texture unless you
[14] have seen the original one 35 times.

[15] **THE COURT:** 35 times is a considerable investment for
[16] this movie. This is not Gone With the Wind.

[17] **MR. GARBUS:** Have you seen that 35 times?

[18] **THE COURT:** I assure you not. Okay. Are we done?

[19] **Q:** Dr. Shamos, am I correct that the two demonstrations we
[20] have just seen, the two side by side demonstrations, one
[21] relating to Sleepless in Seattle, one relating to the Matrix,
[22] in each case compared to the store bought one is a film which
[23] has been subject to DiVX, is that correct?

[24] **A:** Yes.

[25] **Q:** And you have indicated for the record the extent you have

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[1] some or some not difference in perceptual quality in your own
[2] view. If we had looked at the DeCSS version before DiVX was
[3] applied, what would have been the comparison in your opinion?

[4] **A:** Well, it would have been identical to the store bought
[5] DVD.

[6] **MR. SIMS:** Your Honor, I would like to offer 2.34 and
[7] 115D, the comparison of the videos we have just been through.

[8] **MR. GARBUS:** I assume I will have a chance to look at
[9] the copy. I will object to it until I have a chance to see
[10] it.

[11] **THE COURT:** I will receive it subject to a motion.

[12] And as far as a side-by-side comparison, if you think that's a
[13] appropriate, set it up and I will do it, not the whole movie,
[14] but a comparable segment, whatever segment you want.

[15] **MR. GARBUS:** Thank you.

[16] **Q:** Now, Dr. Shamos, let me turn to the subject of file
[17] transfer times. Did you and your assistant Mr. Burns proceed
[18] to make further inquiry into the amount of time it would take
[19] to transfer DiVX copies of the Matrix?

[20] **A:** Yes, we did a couple of experiments on the CMU network.

[21] **Q:** CMU refers to?

[22] **A:** Carnegie Mellon university.

[23] **Q:** Okay. What did you do?

[24] **A:** Well, we used both the 10 megabit per second and the 100
[25] megabit capability at CMU, and we were able to transfer the

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[1] Matrix. It took approximately 20 minutes to transfer it at 10
[2] megabits and approximately 3 minutes to transfer it at 100
[3] megabits.
[4] **Q:** Now, what is the extent to which either 100 megabits or
[5] the other number you just gave me are available throughout the
[6] United States in universities or Internet service providers
[7] for example.
[8] **MR. GARBUS:** I would object to that.
[9] **THE COURT:** I want to hear a foundation.
[10] **Q:** Dr. Shamos, are you familiar and in connection with your
[11] teaching do you have occasion to teach the present and
[12] expected extent of bandwidth capacity in the United States
[13] Internet, I mean in the Internet available in the United
[14] States?
[15] **THE COURT:** Restate the question, please.
[16] **Q:** Dr. Shamos, do you teach and lecture with respect to
[17] Internet bandwidth developments?
[18] **A:** Yes.
[19] **Q:** And to whom?
[20] **A:** To both my university students and the corporations to
[21] whom I give training.
[22] **Q:** Are the transfer times you have just indicated, 20 minutes
[23] using — how many megabits was that?
[24] **A:** 10.
[25] **Q:** 10, and 3 minutes using 100, are those fast transfer times

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[1] based on your knowledge?
[2] **A:** Yes.
[3] **MR. GARBUS:** I object to it. The foundation was
[4] insufficient.
[5] **THE COURT:** Overruled.
[6] **A:** Yes, they are fast. The reason I say that is that
[7] Carnegie Mellon University has a high degree of network
[8] capability not found at all other universities.
[9] **Q:** What is available to the students in the dormitories at
[10] Carnegie Mellon?
[11] **A:** They get 10 megabit.
[12] **Q:** And to your knowledge is that unusual among universities
[13] and colleges in America?
[14] **A:** No, it's very typical, because basically the lowest speed
[15] that Ethernet runs at is 10 megabit these days.
[16] **Q:** Is Carnegie Mellon unique in having a 10 megabit
[17] connection?
[18] **THE COURT:** Hold it. You say the Internet runs a
[19] minimum of 10 megabits per second, but the fact is a lot of
[20] the world is doing this with 56K modems and slower.
[21] **THE WITNESS:** Correct. I didn't say the Internet
[22] runs at that speed. I said Ethernet, which is being used
[23] purely within the university network.
[24] **MR. GARBUS:** I also do note there has been no
[25] foundation for these last answers. In other words, I don't

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[1] know what he teaches in class, I don't know what he knows
[2] about universities.
[3] **THE COURT:** The last answer was directed to Carnegie
[4] Mellon.
[5] **MR. GARBUS:** Right. But prior to that it wasn't.
[6] **THE COURT:** And I sustained that objection or I cut
[7] off the line of testimony. So, now I assume what I'm getting,
[8] unless I hear otherwise, is his personal knowledge of what is
[9] available at the institution he works at. I'm glad he knows
[10] that. I don't know what I have, but I'm glad he knows that.
[11] You do know that, I take it, of your own knowledge?
[12] **THE WITNESS:** I do.
[13] **THE COURT:** Okay. Let's talk about Carnegie Mellon.
[14] **Q:** You testified that 10 megabits is available to the
[15] students at Carnegie Mellon?
[16] **A:** In their dormitories. In general we have 100 megabit
[17] available in classrooms and offices and ten megabit in the
[18] dormitories.
[19] **Q:** Do you lecture with respect to the growth of bandwidth in
[20] recent years and expected future increases?
[21] **A:** Yes, it's of exceptional interest to my corporate
[22] education clients.
[23] **Q:** Have you lectured on those subjects to Morgan Stanley and
[24] the MacKenzie Company?
[25] **A:** Yes.

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[1] **Q:** Do you expect bandwidth available at homes and to people
[2] in universities and at various work sites to continue to grow
[3] over the next few years?
[4] **A:** Yes, I do. There is a manic need for bandwidth.
[5] Companies that have web sites want to deliver more. People
[6] who use the Internet want faster and faster access, they want
[7] their browsing to be more convenient, so there is a crying
[8] need for additional bandwidth, which many private entities are
[9] attempting to supply.
[10] **Q:** Could you describe for the Court the extent to which
[11] bandwidth available in homes has increased over the last 18
[12] months or so?
[13] **A:** Yes.
[14] **MR. GARBUS:** I would object unless I hear more
[15] foundation.
[16] **THE COURT:** I want to hear more foundation.
[17] Sustained.
[18] **Q:** Dr. Shamos, have you lectured with respect to the
[19] increases in bandwidth over the last year or so?
[20] **A:** Available to the home?
[21] **Q:** Yes.
[22] **A:** Yes.
[23] **Q:** And what is the information that you use in your teaching
[24] based on and sourced from?
[25] **A:** It's based on, first, personal experience, since I have

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[1] been using, I have been accessing computer networks from my
[2] home since 1970. I have followed with keen interest the
[3] availability of bandwidth, since I would be a personal
[4] beneficiary of it if I was able to obtain it.

[5] And, of course, in being able to lecture
[6] intelligently on the topic I have endeavored to inform myself
[7] from a variety of sources on what is going on, particularly
[8] various kinds of web pages, news reports and information
[9] posted by the corporations themselves that are involved in
[10] bandwidth provision.

[11] **Q:** Do you have a DSL connection at home?

[12] **A:** I do now.

[13] **Q:** What is a DSL connection?

[14] **A:** A DSL connection is a capability provided by a telephone
[15] company that has a line running to a subscriber's house, in
[16] which they are able to give dedicated service to that
[17] subscriber without his having to share it with someone else.

[18] **Q:** Is it larger bandwidth than a 56K modem would afford?

[19] **A:** Yes.

[20] **Q:** And is it increasingly available in some communities in
[21] the United States?

[22] **A:** Yes, there is a rush among the telephone companies to make
[23] DSL more available because they are able to charge high prices
[24] for it and make a profit.

[25] **Q:** Have you lectured in connection with e-commerce and the

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[1] other topics you have testified about with respect to the
[2] projections of increased bandwidth and its impact on commerce
[3] over the Internet?

[4] **A:** Yes, every course on e-commerce technology that I teach
[5] has a unit on bandwidth and bandwidth increases.

[6] **Q:** And are you familiar with a report or a prediction by
[7] Motorola made a couple of years ago with respect to projected
[8] increases in bandwidth?

[9] **MR. GARBUS:** I will object to the next question after
[10] he says, yes, he is familiar with the report.

[11] **THE COURT:** Let me find out what the next question
[12] is.

[13] **A:** Yes, I am.

[14] **Q:** And what is the report you advised me of?

[15] **THE COURT:** I guess it's a report by Motorola on
[16] expected increase in bandwidth.

[17] **Q:** Yes, with the prediction that Motorola made. When did you
[18] read it?

[19] **A:** Mr. Roberson, who was the chief technology officer of
[20] Motorola in 1998, made a presentation to the Internet
[21] Engineering Task Force. I have reviewed the powerpoint slides
[22] of his presentation.

[23] **Q:** And what —

[24] **MR. GARBUS:** Objection. I have never seen the
[25] powerpoint slides. Even if I did, it would still be hearsay.

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[1] **MR. SIMS:** Your Honor, I have —

[2] **THE COURT:** I haven't gotten there yet, Mr. Garbus.

[3] Next question.

[4] **Q:** And what was the projection in 1998 that Mr. Roberson made
[5] with respect to increases in bandwidth by the year 2000?

[6] **THE COURT:** Now, Mr. Garbus.

[7] **MR. GARBUS:** I think I would like to object.

[8] **THE COURT:** All right. This you are offering for the
[9] truth, right?

[10] **THE WITNESS:** No, I believe.

[11] **THE COURT:** Now wait a minute. I know you went to
[12] law school, but I have enough lawyers in this courtroom.
[13] Mr. Sims.

[14] **MR. SIMS:** Your Honor, this is historical. He is
[15] going to testify that there was a projection in 1998 and he is
[16] going to testify to the present state of the world, and I
[17] don't think that's hearsay. I think that's testimony that
[18] goes to the —

[19] **THE COURT:** Okay. So you are not offering whatever
[20] Mr. Roberson said two years ago for the truth of what Mr.
[21] Roberson said. In fact you are offering it for the purpose of
[22] proving how wrong it was. Is that right?

[23] **MR. SIMS:** I'm not offering for the purpose of its
[24] truth at the time, yes.

[25] **THE COURT:** Overruled.

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[1] **Q:** What was the projection Mr. Roberson, CTO of Motorola,
[2] made in 1998?

[3] **A:** In 1998, before the Internet Engineering Task Force, he
[4] predicted that for early home adopters — and an early home
[5] adopter is someone who is ready willing and able to buy the
[6] latest new thing that is made available, but of course it has
[7] to be made available to the home, as opposed to the more
[8] conservative people or people with insufficient wallets who
[9] wait for a while either for prices to come down or for the
[10] technology to be proven — so, for early home adopters, he
[11] predicted that in the year 2000 seven megabits would be
[12] available in the home.

[13] **Q:** In the year 2000, based on your knowledge and expertise,
[14] is 7 megabits available to homes?

[15] **A:** Yes, I have it in my home and it's made generally
[16] available by Bell Atlantic where they make DSL service
[17] available.

[18] **THE COURT:** Now, DSL service is not available
[19] everywhere, isn't that true?

[20] **THE WITNESS:** Quite right.

[21] **MR. GARBUS:** We were given Mr. Shamos's affidavit,
[22] and as I understand what his testimony was going to be, it was
[23] going to relate to the experiment that he performed. As I
[24] look at the affidavit, he refers in paragraph 31 to available
[25] bandwidths increasing in the United States at such and such a

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[1] rate, and I would just ask whether or not he has any
[2] documentation? I can save that for cross, I suppose.
[3] **THE COURT:** Okay. Thank you. Mr. Sims?
[4] **MR. SIMS:** Yes.
[5] **Q:** Dr. Shamos, what would happen if large numbers of CMU
[6] students attempted to transfer DiVXs at the same time?
[7] **A:** Well, if they were attempting to do that at the CMU
[8] network, they would of course clog the network. Every network
[9] has finite capacity, and if people use it up indiscriminately,
[10] then by clogging the network, the available transfer rates, as
[11] observed by the people attempting to do the transfer, would
[12] become slower and slower and slower, until they became
[13] frustrated and would cease to engage in such activity.
[14] **Q:** You testified a few minutes ago that students —
[15] **THE COURT:** Essentially the same principle as
[16] everybody trying to drive in in the morning on the FDR Drive,
[17] right?
[18] **THE WITNESS:** Yes, I think congestion is an apt
[19] analogy.
[20] **Q:** You testified a few moments ago with respect to a 20
[21] minute download within the CMU network available in the
[22] dormitories, is that correct?
[23] **A:** Yes.
[24] **Q:** Now, do you believe the result of that test reflects
[25] practical and not merely theoretical results?

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[1] **A:** Yes, at that rate we were getting approximately a third of
[2] the available bandwidth. We were getting nowhere near 100
[3] percent of it.
[4] **Q:** To what extent?
[5] **THE COURT:** I don't understand your answer.
[6] **THE WITNESS:** Well, if conditions had been perfect,
[7] and there had been no one else on the network, we might have
[8] been able to achieve triple the speed, so it would have taken
[9] under seven minutes instead of 20. But because we made no
[10] effort to try to achieve perfect conditions but just use the
[11] network in its condition at the time, we got approximately a
[12] third of the theoretical maximum.
[13] **THE COURT:** So, is it correct for me to understand
[14] that in order for you to achieve this 20 minute transfer rate,
[15] using the 10 megabytes per second capability at Carnegie
[16] Mellon, you were using a third of the whole system?
[17] **THE WITNESS:** No, we were using a third of the
[18] capacity of the switch that our machine was connected to.
[19] **THE COURT:** Okay.
[20] **Q:** So the record is clear, is it 10 megabits?
[21] **A:** Yes.
[22] **Q:** Not 10 megabytes.
[23] **A:** Right.
[24] **Q:** Now, do you believe that a 10 megabit connection is widely
[25] available today?

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[1] **A:** It's widely available.
[2] **MR. GARBUS:** I object.
[3] **THE COURT:** Sustained. This is not a matter for
[4] religious testimony. This is presumably objectively knowable.
[5] **Q:** Do you have any information with respect to whether 10
[6] megabit connections are available today other than at CMU?
[7] **A:** Yes.
[8] **Q:** What is that information?
[9] **A:** First of all, let's just talk within a university, without
[10] talking about going out on the Internet. You basically can't
[11] get LANS these days that run at less than 10 megabits. It's
[12] the Ethernet standard capacity. So universities that provide
[13] local area networks to their students all have 10 megabit.
[14] **Q:** Is it common for major universities to have local area
[15] networks for their students?
[16] **A:** Yes.
[17] **Q:** To what extent do you have information with respect to the
[18] availability of that kind of connection outside of
[19] universities?
[20] **A:** Well, outside of universities there are numerous
[21] corporations that have that capacity and greater. Where you
[22] don't get that capacity is typically in the home.
[23] **MR. GARBUS:** I would object to the foundation, your
[24] Honor.
[25] **THE COURT:** Overruled.

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[1] **Q:** Based on your teaching and your experience in the
[2] institute of e-commerce —
[3] **THE COURT:** Let me go back to that ruling. You are
[4] not seriously disputing, Mr. Garbus, are you, that lots of
[5] corporations in the United States have networks with greater
[6] than 10 megabit or megabyte capacity per second?
[7] **MR. GARBUS:** I don't know.
[8] **THE COURT:** Well, maybe you ought to talk to your
[9] technical advisors and come back to me on that. If that's
[10] seriously in dispute, I am prepared to strike the answer, but
[11] I took that as a given.
[12] **MR. GARBUS:** Thank you.
[13] **Q:** And based on your experience teaching e-commerce issues,
[14] teaching of e-commerce and Internet connections, what do you
[15] see as the implications of fast Internet connections and
[16] increased bandwidth for copyright owners of motion pictures
[17] released on DVDs?
[18] **A:** Well, I think it's clear what is going on in the music
[19] industry.
[20] **MR. GARBUS:** I object to the question, your Honor.
[21] **THE COURT:** Overruled. I am going to hear it,
[22] Mr. Garbus. You obviously have arguments and
[23] cross-examination.
[24] **A:** It's clear what has gone on in the music industry, that
[25] compressed audio files are being made available and are being

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[1] traded back and forth among people and being acquired from
[2] archives of such things and are being used to replace the need
[3] to purchase music from other sources. The difference between
[4] audio and watching movies is of course that movies are much
[5] longer and, therefore, are represented by longer files.
[6] Furthermore, they have video in addition to audio, and that
[7] also increases the size of the files, and therefore the
[8] transfer time for these things is larger.

[9] However, with increases in internet capacity and
[10] bandwidth availability to the home and other places, it's
[11] completely clear to me that exactly the same thing is going to
[12] happen with videos as has happened with Napster. In fact the
[13] entire movie industry is attempting to explore video on
[14] demand. They want to be able to sell you the movies directly
[15] to your home if it can be done in a secure manner.

[16] Q: Other than your experience that you have testified to
[17] concerning the particular Internet relay chat that Mr. Burns
[18] had, do you have reason to believe, and do you have an opinion
[19] based on your experience and teaching that trading in digital
[20] copies of DiVX films is growing?

[21] A: Yes. I have an opinion and the opinion is it sure is.

[22] MR. GARBUS: Objection. I object to the question and
[23] the answer.

[24] THE COURT: I am going to take it for what it's
[25] worth, but obviously, Mr. Sims, the better the foundation the

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[1] the more persuasive it is.

[2] MR. SIMS: Let me hand up Exhibit 116B, which we have
[3] given to the defendants.

[4] Q: Dr. Shamos, what is this document?

[5] A: This document is a print-out of a number of pages obtained
[6] from the website iSONEWS.

[7] Q: Was it printed out under your direction?

[8] A: Yes. I pointed you to it, and together we printed out the
[9] pages.

[10] Q: When did we do that?

[11] A: Yesterday.

[12] Q: Now, is iSONEWS a website?

[13] A: Yes.

[14] Q: And what part of the iSO website do these pages represent?

[15] A: iSONEWS is a place where people may obtain information
[16] about the existence of various movies in different kinds of
[17] formats, so we went to iSONEWS and asked what it knew about
[18] DiVXs.

[19] Q: Does it organize the different kinds of materials for
[20] which information is provided into various formats?

[21] A: Yes, it does. DiVXs is in their own separate category,
[22] and we looked only at DiVXs, and the DiVXs in the terminology
[23] of iSONEWS had been "released." That doesn't mean released by
[24] Hollywood. That means released by the pirates who were
[25] descrambling them and DiVXing them. This lists.

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[1] MR. GARBUS: Objection.

[2] THE COURT: I couldn't hear you, Mr. Garbus.

[3] MR. GARBUS: I object to this statement.

[4] THE COURT: Overruled.

[5] A: And the way the DiVX section of iSONEWS is organized, is
[6] it shows you by each month, starting in January 2000, which
[7] movies have become available for trading on the Internet
[8] through the DiVX format. What it shows — unfortunately this
[9] is on the last page, SMS68. It shows that in January 2000 no
[10] releases were found. But on the preceding page, SMS67, this
[11] is the list of DiVXs from February where there were
[12] approximately nine available. Then in March it appears as
[13] though a couple of hundred became available. And if you
[14] include everything from the zero in January through the July
[15] listing — and of course we are not even at the end of July —
[16] the total exceeds 650, which I understand to be more than 10
[17] percent of all DVDs available in the United States.

[18] THE COURT: All right. We are breaking for lunch
[19] here, and I obviously know that Mr. Garbus has the word
[20] "hearsay" at the tip of his tongue, and you might think about
[21] it over lunch, Mr. Sims.

[22] (Luncheon recess)

[23]

[24]

[25]

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AFTERNOON SESSION

[1] 2:00 p.m.

[3] MICHAEL SHAMOS, resumed.

[4] THE COURT: Sorry for the delay. Let's continue.

[5] DIRECT EXAMINATION Continued

[6] BY MR. SIMS:

[7] Q: Dr. Shamos, I believe the last question had to do with
[8] explaining what you see in Plaintiff's Exhibit 116B, which was
[9] this printout of a list of titles of films on iSONEWS. Have
[10] you completed your answer?

[11] MR. GARBUS: Excuse me, your Honor. We did not at
[12] the beginning of trial discuss the whole question of exclusion
[13] of witnesses.

[14] THE COURT: No, we didn't. Nobody brought it up.

[15] MR. GARBUS: I would ask that all witnesses be
[16] excluded from the courtroom, if they are going to then
[17] testify.

[18] THE COURT: Mr. Sims?

[19] MR. SIMS: Your Honor, I think this is the sort of
[20] case that doesn't involve who did what to whom when and when
[21] the accident happened. So, I don't think it's necessary.

[22] THE COURT: It's not an optional matter under the
[23] Rule.

[24] MR. SIMS: If it's not an optional matter —

[25] THE COURT: If there's anybody who may be a witness

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[1] in this case in the courtroom, they are going to have to wait
[2] outside until their testimony is concluded one by one. So, if
[3] there is anybody in the courtroom, you are out.

[4] If you would like, folks, you can use the jury room,
[5] because we obviously don't have the jury. It should be open.

[6] **MR. SIMS:** One moment, your Honor.

[7] **THE COURT:** The Rule, of course, allows each side to
[8] have one designated representative of a party. I think it's
[9] Rule 613, folks.

[10] **MR. SIMS:** Your Honor, Mr. Gold — can Mr. Gold be
[11] excused to get our representative back, Ms. Kean? Thank you.

[12] **THE COURT:** Yes. That's the wrong rule. It's 615.

[13] **BY MR. SIMS:**

[14] **Q:** Dr. Shamos, I think you were testifying about what you
[15] understand and see in Exhibit 116B. Have you completed your
[16] answer? Do you recall?

[17] **THE COURT:** I'm not sure he started.

[18] **MR. SIMS:** O.K.

[19] **Q:** Why don't you explain what 116B is?

[20] **A:** O.K., I think I explained that, just to review it quickly
[21] that this was a printout of pages made from the iSONEWS web
[22] site under the section hyper letter linked DiVX'd and this
[23] appears to constitute a list, at least by its own term, it
[24] says it constitutes a list of DiVXs that have been "released
[25] month by month since January of 2000," in sum total exceeding

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[1] 650 of them, which I then testified it was my understanding
[2] that that constitutes more than 10 percent of all DiVXs — of
[3] all DVDs available in the United States.

[4] **THE COURT:** Mr. Garbus?

[5] **MR. GARBUS:** I have made an objection to that on the
[6] grounds of hearsay.

[7] **THE COURT:** I am sure you are offering that one for
[8] the truth; right, Mr. Sims?

[9] **MR. SIMS:** The number that I want in, your Honor, is
[10] the number of films on this list and as to that, I know that
[11] the witness counted them up himself because I watched him do
[12] it.

[13] **THE COURT:** But how do I know that these films are
[14] actually out there?

[15] **MR. SIMS:** I think he's testifying to the number of
[16] films on the list and not whether they are actually out there.
[17] And I think that —

[18] **THE COURT:** What is the relevance of a list of things
[19] unless they are out there?

[20] **MR. SIMS:** I believe, your Honor, that we'll tie it
[21] up and we'll show you that it's relevant over the next few
[22] moments.

[23] **THE COURT:** Well, I will take it subject to
[24] connection, but obviously its relevance depends on your
[25] producing evidence, competent evidence sufficient to persuade

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[1] me that, in fact, these movies are out there.

[2] **MR. SIMS:** I believe that I will be able to connect
[3] it up for relevant purposes. It may not be that precise fact,
[4] your Honor.

[5] **THE COURT:** All right. Mr. Garbus' objection is well
[6] taken at this point.

[7] **BY MR. SIMS:**

[8] **Q:** Dr. Shamos, look, if you would, at page SMS66 toward the
[9] back of this. And do you see a film on March 14th identified
[10] with that date and the word "ant"?

[11] **A:** Yes, I do.

[12] **Q:** Did you click on anyplace on that line and obtain further
[13] information?

[14] **A:** Yes, if you click on the icon on the extreme right-hand
[15] edge of the page, which looks like a little notebook, then
[16] that calls up a page of information about that particular
[17] film.

[18] **MR. SIMS:** If I may approach, your Honor, may I
[19] hand — I'm not sure this is in the books, 114F.

[20] **THE WITNESS:** It's in the book.

[21] **Q:** Is this the printout of the information you obtained when
[22] you clicked on the word "ants" on page SMS66 of iSONEWS?

[23] **A:** Yes.

[24] **Q:** Now, does anything on 114F suggest to you — let me
[25] rephrase that.

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[1] **THE COURT:** While you are thinking about that, let me
[2] say for the information of counsel that I have just signed an
[3] order denying the motion put out by the defendants and as soon
[4] as the copy machine does its job, you will have copies.

[5] **MR. GARBUS:** May we have an appropriate stay to go to
[6] the Second Circuit?

[7] **THE COURT:** Denied.

[8] **MR. SIMS:** I'll come back to that in a moment, Dr.
[9] Shamos.

[10] **Q:** Have you formed an opinion about the feasibility of
[11] locating and downloading DiVX'd decrypted DVDs from the
[12] Internet?

[13] **A:** Yes.

[14] **Q:** What is that?

[15] **MR. GARBUS:** I object to that.

[16] **THE COURT:** Grounds?

[17] **MR. GARBUS:** I don't know — there's no foundation
[18] for it that he's an expert in this area and he's finding stuff
[19] on the Internet.

[20] **THE COURT:** Excuse me? You dropped your voice.

[21] **MR. GARBUS:** He's not an expert of finding materials
[22] on the Internet. It's a factual matter.

[23] **THE COURT:** Overruled. Overruled.

[24] **Q:** Before you tell me what your opinion is, tell me what it's
[25] based on?

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[1] **A:** I have several bases for it. One is the personal
[2] experience in observing the result of the Matrix having been
[3] exchanged over the Internet and the apparent availability of
[4] other films that we could obtain by communicating with pound
[5] on the pound DiVX chat room and also the existence of iSONEWS
[6] and the pointers that it gives to 650 movies which have been
[7] ripped and are available in DiVX format now on the Internet.
[8] **Q:** Does the information you printed on No. 114F point back to
[9] the instructions you used with respect to making the DiVX'd
[10] decrypted copy of Sleepless in Seattle?
[11] **A:** Yes, it does.
[12] **Q:** Where?
[13] **A:** Well, we can do it a couple of ways. I can point you to
[14] it directly now or we can just go through it in order. But it
[15] says, approximately two-thirds or three-quarters of the way
[16] down on the second column, backspace, BCKSPC sends personal
[17] greetings/props to he can prog of FM4 for help on rip
[18] techniques.
[19] Decoding this for humans, it seems to mean that the
[20] person who ripped this particular movie into DiVX'd format
[21] obtained instructions from how to do so from FM4.org which, of
[22] course, recommends that step 1 be DeCSS.
[23] **Q:** And is FM4 the web site you went to and obtained
[24] instructions from and followed in connection with the
[25] experiment you testified about this morning?

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[1] **A:** Yes.
[2] **Q:** What is your opinion about the feasibility of locating and
[3] downloading DiVX'd decrypted DVDs from the Internet?
[4] **THE COURT:** The question is compound. Ask it in
[5] separate parts.
[6] **Q:** What does — what is your opinion of the feasibility of
[7] locating DiVX'd decrypted DVDs from the Internet?
[8] **A:** My opinion.
[9] **MR. GARBUS:** I object to it.
[10] **THE COURT:** Let me just review the question again.
[11] Overruled. I will take it for what it's worth.
[12] **A:** My opinion is that if one goes to Internet relay chat, it
[13] is relatively easy to do it. If one attempts to contact the
[14] people who list themselves on iSONEWS, it's much more
[15] difficult.
[16] **Q:** What is your opinion as to the feasibility of downloading
[17] DiVX'd decrypted DVDs from the Internet?
[18] **A:** Well, since we did it, I could testify that it's feasible.
[19] **Q:** Have you formed an opinion of the likelihood that the
[20] incidence of decryption using DeCSS and compression of
[21] authorized DVDs is on the rise?
[22] **A:** Yes.
[23] **Q:** What is that opinion based on?
[24] **A:** The opinion —
[25] **MR. GARBUS:** Objection.

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[1] **THE COURT:** Overruled.
[2] Again, your point goes to the weight, Mr. Garbus. I
[3] do understand your point.
[4] **A:** My opinion — could you read the question back?
[5] **Q:** Yes, what is your opinion based on and the opinion I'm
[6] referring to and I haven't yet asked you what that opinion is
[7] is whether you have an opinion of the likelihood that the
[8] incidence of decryption using DeCSS in compression of
[9] authorized DVDs is on the rise?
[10] **MR. GARBUS:** Objection.
[11] **THE COURT:** Same ruling.
[12] **Q:** What is that opinion based on?
[13] **A:** The opinion is based on the increase in Internet bandwidth
[14] that has both been observed and predicted. The trends in the
[15] music industry which are basically on a parallel with this one
[16] and also on the rise month by month, in huge rise month by
[17] month in the number of titles mentioned on iSONEWS as having
[18] been DiVX'd ripped.
[19] **Q:** What is your opinion?
[20] **A:** My opinion is that it's on the rise. I believe that as
[21] long as there's a DVD out there, the people who are ripping
[22] them won't stop until they're all ripped.
[23] **Q:** Have you formed an opinion as to the role that DeCSS has
[24] played in the availability of these decrypted compressed DVDs
[25] available on the Internet?

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[1] **A:** Yes.
[2] **MR. GARBUS:** I'll object.
[3] **THE COURT:** Overruled.
[4] **Q:** What's the basis for that opinion?
[5] **A:** The basis for the opinion is in examining the web sites on
[6] the Internet that give people advice and instructions on how
[7] to obtain a DiVX'd copies of movies from DVDs, the tool —
[8] DeCSS is frequently listed as the tool of choice. It's listed
[9] so on FM4 and on other web sites.
[10] Not only that, credit is given by several people on
[11] iSONEWS which appears to state that they have used or
[12] benefited from advice from FM4, which is precisely to use
[13] DeCSS.
[14] **MR. GARBUS:** I also object on the grounds that
[15] everything he has just said, I gather, was based on other
[16] people who have said. It's also a hearsay objection.
[17] **THE COURT:** So far all he's given is the basis for
[18] his opinion. He hasn't told us the opinion, although I'm sure
[19] you have a heads up on what it will be.
[20] **Q:** Dr. Shamos, what is your opinion as to the role that DeCSS
[21] is likely playing in the availability of decrypted compressed
[22] DVDs on the Internet?
[23] **MR. GARBUS:** I object to the question.
[24] **THE COURT:** I'm going to hear the answer, Mr. Garbus,
[25] but I understand your point and I'm by no means sure that it

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[1] is reliable evidence.

[2] **Q:** Dr. Shamos?

[3] **A:** My opinion is that it plays a major role because it's an
[4] extremely easy-to-obtain tool and easy-to-use tool and a
[5] highly-recommended tool.

[6] **Q:** So far as you know, is there any reliable way to ascertain
[7] whether any particular DiVX'd unscrambled motion picture
[8] available on the Internet or obtained from the Internet is the
[9] result of DeCSS?

[10] **A:** I don't know of such a way of making that determination.

[11] **Q:** Is there any other descrambling mechanism other than DeCSS
[12] that you consider a more — a more feasible way, an easier way
[13] of obtaining a DiVX'd DeCSS film other than DeCSS?

[14] **A:** Well, I'm not aware of any, but I've given in deposition
[15] testimony that I don't have deep familiarity with the other
[16] methods.

[17] **MR. SIMS:** Your Honor, I'd like to offer Exhibits
[18] 115A, which is the session of the Internet relay chat which
[19] shows the provenance of the copy of Matrix that was obtained
[20] by Dr. Shamos.

[21] **MR. GARBUS:** I object to both of these documents on
[22] the grounds previously stated.

[23] **MR. SIMS:** I think maybe the record should get the
[24] second one that I'm offering before —

[25] **THE COURT:** Yes, I don't know what the second one is

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[1] yet.

[2] **MR. SIMS:** And the second one is 116B, which is the
[3] list of — from iSONEWS and is offered, not for the fact that
[4] these particular films can be obtained, but for the fact that
[5] they are listed as having been obtained in the increasing
[6] availability that the iSONEWS exhibit reflects.

[7] **MR. GARBUS:** I don't have to repeat my objection.

[8] **THE COURT:** I'm going to take them for what they are
[9] worth.

[10] (Plaintiff's Exhibits 115A and 115B received in
[11] evidence)

[12] **MR. SIMS:** I'm told there's one exhibit that I left
[13] off and it's the one on the stand; 114F. I would offer that
[14] as well. 114F, the "ants" piece, there's a stipulation of
[15] authenticity between the attorneys, your Honor, and it's — I
[16] offer it.

[17] **MR. GARBUS:** I object to that on the grounds that it
[18] is hearsay, also.

[19] **THE COURT:** Here, I think you are not offering it for
[20] the truth.

[21] **MR. SIMS:** No, it is available. Dr. Shamos knows
[22] it's available and it advises people of tools, including DeCSS
[23] to obtain — to unscramble and transmit this.

[24] **MR. GARBUS:** I object on the grounds of hearsay.

[25] **THE COURT:** Look, in part, it's obviously offered and

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[1] I think it was explicitly indicated by the witness to be one
[2] of the bases of an opinion and certainly to that extent, it's
[3] admissible.

[4] I'm not sure looking at it that it really is offered
[5] for a hearsay purpose, but I will certainly consider that and
[6] if we ever get to the point of post-trial briefing or closing
[7] arguments, I am simply going to take that into account and
[8] what I typically do in non-jury trials is not get too hung up
[9] on the hearsay rule on something like this, but rather simply
[10] make clear when I rule in the case what I have relied on and
[11] what I haven't because if I ultimately don't rely on this, it
[12] doesn't matter.

[13] So, I'm going to take these three exhibits, but I'm
[14] going to take it on that understanding that if the defendants
[15] ever want any further clarification, they are certainly at
[16] liberty to make a motion to strike further along in the case.
[17] And if I have concluded at that point that it really is being
[18] offered for a hearsay purpose, and it really is hearsay, then
[19] I will strike it.

[20] **MR. SIMS:** Your Honor, that concludes this witness'
[21] testimony.

[22] If I could have a few minutes to address the question
[23] of Mr. Burns that had been raised earlier? Mr. HERNSTADT and
[24] I have spoken at a little bit at length on this.

[25] **MR. HERNSTADT:** Your Honor, I think it's — well, we

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[1] haven't raised the question of Mr. Burns at this point, so.

[2] **THE COURT:** I'm not sure I understand what you are
[3] all saying to me.

[4] **MR. SIMS:** We had offered the — I'm sorry. May I
[5] have a moment, your Honor?

[6] (Pause)

[7] **MR. SIMS:** Your Honor, I've completed the
[8] examination.

[9] **THE COURT:** Pardon me?

[10] **MR. SIMS:** I've completed the examination.

[11] **MR. HERNSTADT:** The question of Mr. Burns, I think on
[12] cross-examination, it will be very clear we need to have his
[13] deposition and he needs to be a witness in this case. I don't
[14] know. I'm told Dr. Shamos has concluded with his testimony
[15] that there isn't anything to address on that, but we are happy
[16] to do it now, if your Honor wishes.

[17] **THE COURT:** Well, if it's not clear before you cross
[18] this witness whether there's anything to address on the other
[19] one, why don't I hear it now. Let's just go ahead with the
[20] cross-examination.

[21] **MR. HERNSTADT:** I think it will all be clear.

[22] Your Honor, there is one other issue before we start
[23] cross-examination. We've notified the plaintiffs that
[24] Mr. Stevenson, Frank Stevenson, one of our declarants is
[25] actually in New York and he's going to be here until tomorrow.

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[1] I think we mentioned that to your Honor as well and
[2] we sent him letters and there's nothing new about this. We'd
[3] like to take his testimony while he's here, if that's
[4] possible.
[5] **THE COURT:** I will hear him out of order.
[6] **MR. HERNSTADT:** O.K. We can give them an opportunity
[7] to meet with him tonight to take his deposition, if they want,
[8] or just to talk to him, if they want, and we can take him
[9] tomorrow. He's leaving tomorrow.
[10] **THE COURT:** Mr. Gold, any problem?
[11] **MR. GOLD:** Yes. This was a witness that was
[12] designated approximately one week to one and a half weeks
[13] after we were done naming witnesses. They've known that
[14] Mr. Stevenson — I think he submitted an affidavit before the
[15] preliminary injunction motion was decided. But —
[16] **THE COURT:** Well, not before the preliminary motion
[17] was decided.
[18] **MR. GOLD:** After the preliminary injunction, but it
[19] was months ago. So, this isn't a new person that they've run
[20] into and I don't understand why we would be naming witnesses
[21] so long after the Court's order.
[22] **THE COURT:** Mr. Hernstadt?
[23] **MR. HERNSTADT:** It's, as we've explained to the
[24] plaintiffs and your Honor, he lives in Oslo and it was just
[25] not clear that he was going to be able to be here and I've

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[1] informed the plaintiffs of that on several occasions as well
[2] and it turns out he was able to come for four days and he's
[3] leaving tomorrow.
[4] **MR. GOLD:** Well, we had no notice and at the time I
[5] first heard about this witness, I said, O.K., there are planes
[6] to Oslo. We'll go take his deposition.
[7] **THE COURT:** We will discuss this more later on.
[8] Let's proceed with the cross.
[9] Look, it is an expedited case within reasonable
[10] limits. I'm going to give everybody some leeway. My concern
[11] is to make sure I have the facts. That's what I want to get
[12] to.
[13] Now, let me just also be clear before Mr. Garbus
[14] starts. I'm not sure that the exhibits that were used on the
[15] Matrix demonstration were ever offered. 111, 115D, and my
[16] clerk has passed me a note about 2.34; 2.34 was not Matrix;
[17] 2.34 was Sleepless in Seattle, or am I wrong?
[18] **MR. SIMS:** I thought I offered them, but I can
[19] certainly give you the proper numbers for each examination.
[20] The first demonstration involved 2.28 and Exhibit 111. And I
[21] believe I offered them. If I didn't —
[22] **THE COURT:** My notes indicate that I received 2.28.
[23] They don't indicate that 111 was received. That's the burned
[24] in CD.
[25] **MR. SIMS:** That's correct.

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[1] **THE COURT:** Any objection?
[2] **MR. HERNSTADT:** We object to that. It's not the same
[3] CD that was provided to us. Ours is different. And there's
[4] also some mysterious date problems in terms of when it was
[5] created and when it was modified as reflected on the CD. It's
[6] something that we would want to inquire of the person who made
[7] the CD.
[8] **THE COURT:** Look, I've already said you could examine
[9] that CD.
[10] **MR. HERNSTADT:** We examined the CD and the CD told
[11] us, I'm actually not sure, are we talking about the CD of
[12] Sleepless in Seattle?
[13] **MR. SIMS:** Yes.
[14] **MR. HERNSTADT:** That it was created yesterday?
[15] **THE COURT:** That's what I think counsel said earlier.
[16] **MR. HERNSTADT:** Right. However, on the hard drive,
[17] it says that that was created on — yeah, it was created on
[18] July 9th and it was modified on June 26th.
[19] **THE COURT:** Whose hard drive?
[20] **MR. HERNSTADT:** On the hard drive from the file. In
[21] other words, the file from which it was burned the other
[22] computer hard drive from which the CD was burned states that
[23] it was created on July 9th and that file was modified on June
[24] 27th.
[25] **THE COURT:** Right.

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[1] **MR. HERNSTADT:** That's obviously impossible, so it
[2] makes me wonder.
[3] **THE COURT:** I see what you are saying.
[4] **MR. HERNSTADT:** We are more alert about the drive.
[5] **THE COURT:** I will take 111 subject to a motion to
[6] strike because that, in fact, was the one that was played.
[7] **MR. SIMS:** That's correct, your Honor.
[8] **THE COURT:** There's no dispute about that; right, Mr.
[9] Hernstadt?
[10] **MR. HERNSTADT:** No, your Honor.
[11] **THE COURT:** If there's really a question about what
[12] it is, obviously we will get to the bottom of it.
[13] **MR. SIMS:** The second demonstration, your Honor,
[14] involved Matrix which was 2.34 and 115A, I believe.
[15] **THE COURT:** 2.34 is in. I received that and 115D.
[16] 115A was not offered.
[17] **MR. SIMS:** 115D, your Honor.
[18] **MR. HERNSTADT:** Which is the one that's the burned?
[19] **MR. SIMS:** 115D is the burned Matrix that the
[20] testimony —
[21] **THE COURT:** That's already been received; D.
[22] **MR. HERNSTADT:** O.K., I didn't understand that it
[23] had. We object to that as well. We wanted to look at the
[24] hard drive and at that disk.
[25] **THE COURT:** You are welcome to look at that, too.

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[1] **MR. HERNSTADT:** We have. And it's even more
[2] problematic because the burned versions that we got have
[3] modified — dates of modification that are different, June 14
[4] and June 19, and it also on the hard drive says it was created
[5] on July 9th and modified on June 15th.
[6] **THE COURT:** Which is a nice trick in anybody's
[7] technology.
[8] **MR. HERNSTADT:** Which is a nice trick.
[9] **THE COURT:** Same ruling on that. You can move to
[10] strike it if there's really a problem here.
[11] **MR GOLD:** Your Honor?
[12] **THE COURT:** Yes?
[13] **MR GOLD:** May I have one more sentence on the
[14] Stevenson matter? If the Court is going to permit his
[15] testimony tomorrow, we'd like a chance tonight to take a short
[16] deposition.
[17] **THE COURT:** We'll talk about it at 4:30.
[18] **MR GOLD:** Thank you.
[19] **THE COURT:** Let's go ahead, Mr. Garbus.
[20] **CROSS-EXAMINATION**
[21] **BY MR. GARBUS:**
[22] **Q:** Mr. Shamos, directing your attention to this exhibit, it's
[23] not numbered here.
[24] **A:** It's numbered on the back on the upper right side.
[25] **Q:** 106.

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[1] **A:** Yes.
[2] **Q:** Mr. Sims asked you to read the first sentence and the
[3] second sentence of — under the heading "how can you help"?
[4] **A:** I don't think he asked me to read it, but I did read it.
[5] **Q:** And what is the third sentence? Will you read the first
[6] two sentences?
[7] **A:** Yes. "While we have every intention of sticking this out
[8] to the end, we have to face the possibility that we could be
[9] forced into submission. For that reason, it's especially
[10] important that as many of you as possible all throughout the
[11] world take a stand and mirror these files.
[12] **Q:** What is the sentence?
[13] **A:** Don't do this because you just want to copy DVDs. That's
[14] not what the — what this fight is about at all. This is
[15] about freedom of information. The right we all still have.
[16] **Q:** That's all. Now, with respect to Exhibit 116B, did you
[17] download any of these films?
[18] **A:** No.
[19] **Q:** With respect to ants that you testified about before, did
[20] you download ants?
[21] **A:** No.
[22] **Q:** Tell me how you came to be in this case? Did Proskauer
[23] approach you? Did the MPA approach you?
[24] **A:** I received a telephone call in the range of a month ago,
[25] maybe a little bit more, from an attorney Mark Litvak, who

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[1] works for the MPAA.
[2] **Q:** And how did you know him?
[3] **A:** How about if I finish the first answer, then I'll answer
[4] the second question?
[5] **Q:** Go ahead.
[6] **A:** O.K. And Mr. Litvak said to me, we have a case going on
[7] in New York. How would you like to help us out like you did
[8] on the "I Crave TV Case"?
[9] **Q:** Now, are you finished with your answer?
[10] **A:** Yes.
[11] **Q:** Was the MPA involved in the "I Crave TV Case"?
[12] **A:** Yes, I don't believe the MPAA was a party, but
[13] representing the movie industry, including a huge number of
[14] plaintiffs, it had an involvement.
[15] **Q:** And what is your best judgment about the total amount of
[16] fees that you're going to earn as a result of your testimony
[17] in the "I Crave" case and in this case?
[18] **A:** The "I Crave" case, the total fees were \$20,000. In this
[19] case, I could make an estimate, but I think it's going to
[20] depend on how long you cross me.
[21] **Q:** Let's assume we finish with you by tomorrow at lunch, if
[22] the judge permits that, what would your total fees be?
[23] **A:** Yes, probably something in the range of \$30,000.
[24] **Q:** And how much do you get an hour for your testimony?
[25] **A:** I'm not paid for my testimony. I'm paid for the time that

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[1] I put in on the case. I don't charge a different rate while
[2] I'm up on the stand than I do for background research.
[3] **Q:** And it's the same rate if you're flying here or traveling
[4] here?
[5] **A:** If I have to have dead time that I can't use for other
[6] purposes, I do bill that; yes.
[7] **Q:** Now, and is that rate about \$400 an hour?
[8] **A:** It's exactly 400.
[9] **Q:** Now, when Proskauer first came to you — pardon me.
[10] When Mr. Litvak first came to you, tell me what you
[11] and he said?
[12] **A:** Well, as I testified, he asked me if I would be willing to
[13] help him out again. And I said, well, I certainly have to
[14] know what the case is all about. And my recollection is that
[15] he thereupon brought in Mr. William Hart, who's an attorney at
[16] Proskauer, in a conference call with me and the basics of the
[17] case were described to me.
[18] **Q:** And were you sent any of the affidavits or pleadings in
[19] the case?
[20] **A:** Yes, I was sent a pile of pleadings, documents filed in
[21] the case. I recall that it was approximately 3 or 400 pages
[22] worth of the material.
[23] **Q:** And did you read the affidavit of Dr. Abelson?
[24] **A:** I don't recall whether I read the affidavit of Dr. Abelson
[25] then or subsequently, but I have read the affidavit of Dr.

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[1] Abelson.
[2] **Q:** Who is Dr. Abelson?
[3] **A:** Dr. Abelson is a computer scientist at MIT.
[4] **Q:** And you described him at the deposition on Monday —
[5] pardon me — on Saturday as a fabulous computer scientist?
[6] **A:** I'm not sure if I used the word "fabulous," although I
[7] would agree with that characterization. I think I used the
[8] word outstanding.
[9] **Q:** Now, did you also read the affidavit of Dr. Teretsky?
[10] **A:** Yes.
[11] **Q:** And is Dr. Teretsky at Carnegie-Mellon?
[12] **A:** Yes.
[13] **Q:** And did Dr. Teretsky post DeCSS and CSS on his web site?
[14] **A:** He posts DeCSS in course code form and in various other
[15] forms on his web site.
[16] **Q:** When you say, he posts it in various forms on his web
[17] site, can you tell me in what forms he posts it?
[18] **A:** Yes. He has the C language source code of DeCSS. He has
[19] a tee shirt, a graphic image of a tee shirt on which the
[20] source code appears.
[21] He has a graphic image of a page on which the source
[22] code is printed. He has a version of the algorithm for DeCSS
[23] which has been written in a hypothetical computer language of
[24] Dr. Teretsky's own creation. He has a version of the DeCSS
[25] source code interspersed with English language commentary and

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[1] I think he also has an English language description of the
[2] DeCSS algorithm without any code in it.
[3] **Q:** And to your knowledge, can anyone with a computer have
[4] access to that, to Dr. Teretsky's web C page?
[5] **A:** Anyone who can access the Internet can access that web
[6] page.
[7] **Q:** Do you know how long Dr. Teretsky has had it on his web
[8] page?
[9] **A:** No, I don't.
[10] **Q:** Has Carnegie-Mellon, to your knowledge, ever suggested
[11] that he take it down?
[12] **A:** Not to my knowledge.
[13] **Q:** Do you know how many students have downloaded that from
[14] his page?
[15] **A:** No, I don't.
[16] **Q:** Do you know how many hundreds of thousands of people have
[17] downloaded that from his page?
[18] **A:** I would have no way of knowing that.
[19] **Q:** Now —
[20] **A:** Although it's possible we could get the logs from the CMU
[21] system administrator. I haven't been asked to do that and I'm
[22] not such an administrator.
[23] **THE COURT:** Do you have any knowledge that the
[24] number, in fact, is in the hundreds of thousands?
[25] **THE WITNESS:** No, I don't.

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[1] **Q:** Did you also look at the affidavit of Dr. Appel?
[2] **A:** Yeah, I recall scanning it. I don't recall any details of
[3] it.
[4] **Q:** Dr. Appel is at Princeton?
[5] **A:** Yes.
[6] **Q:** And is he a well-known and respected computer scientist?
[7] **A:** Very much so. He got his Ph.D. at CMU.
[8] **Q:** And do you know that Dr. Appel links to Teretsky's web
[9] site?
[10] **A:** I didn't know that.
[11] **Q:** Do you know who Dr. Ed Felton is?
[12] **A:** No, I don't. I mean, I know that he gave a declaration in
[13] this case that I scanned, but I don't have any independent
[14] knowledge of who he is.
[15] **Q:** How about Professor Peterson?
[16] **A:** Same.
[17] **Q:** Now, you testified yesterday that — well, let me continue
[18] with you and Proskauer.
[19] So, after you had this first conversation, what then
[20] happens?
[21] **A:** Well, I received the documents. I looked over the
[22] documents, and the reason I asked for the documents was to
[23] make sure that I had at least some material from the defense
[24] so I could understand what the defense's position was.
[25] I was also sent a copy of the order granting

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[1] preliminary injunction so I could determine what the judge's
[2] preliminary thinking in this case was. On that basis, I
[3] decided to participate.
[4] **Q:** And you saw the various estimates that the defendants
[5] declarants — Beckers, Abelson, Felton, Peterson had made with
[6] respect to times transmissions of information over the
[7] Internet?
[8] **A:** Well, I have seen that prior to sitting here today. I
[9] don't recall whether I saw those prior to deciding whether to
[10] enter the case or not.
[11] **Q:** And you had seen in their affidavits their testimony
[12] concerning compression, times of compression and times of
[13] transfer, is that right?
[14] **A:** Yes.
[15] **Q:** Now, did you at some point go to a search engine to see if
[16] you could find a reference to DeCSS?
[17] **A:** Yes.
[18] **Q:** When did you do that?
[19] **A:** I did that before preparing my declaration.
[20] (Continued on next page)

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[1] BY MR. GARBUS:
[2] Q: And which search engine was it?
[3] A: I used HotBot, H-O-T-B-O-T.
[4] Q: And what did it indicate?
[5] A: It indicated a huge number of pages on the Internet that
[6] made reference to the stream DeCSS.
[7] Q: Do you know of one person who copied illegally a DVD as a
[8] result of any information posted by the defendant in this
[9] case?
[10] MR. SIMS: Objection. Calls for a legal conclusion.
[11] THE COURT: Sustained as to form.
[12] Q: Do you know of any one person who copied a DVD as a result
[13] of any download from 2600, yes or no?
[14] A: Of my own personal experience, other than Eric and myself,
[15] no.
[16] Q: Now, has anyone at the MPA ever told you that they know of
[17] any one person that ever copied a DVD as a result of
[18] downloading material from 2600.com?
[19] A: I testified in deposition that the sum total of my
[20] conversations with the MPA in my lifetime has been
[21] approximately five minutes, and during that five minutes, no,
[22] they did not communicate that to me.
[23] Q: What is the sum total of your conversations with the
[24] Proskauer law firm?
[25] A: Pardon me?

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[1] Q: What is the sum total —
[2] A: Oh, well, my presence at the Proskauer law firm and
[3] engaged in conversations with people at the Proskauer firm is
[4] probably something like 20 hours, 25 hours.
[5] Q: And in addition to that, have you sought on the outside to
[6] get any anecdotal information about 2600.com?
[7] A: Anecdotal meaning what?
[8] Q: Meaning asking people things, talking to people.
[9] A: I haven't talked to people about 2600.com. Any
[10] investigation I did was on the Internet by visiting it myself
[11] and looking for links.
[12] Q: Did anyone at the Proskauer law firm in the 20 hours you
[13] spent with them ever tell you that a copy was ever made as a
[14] result of a download from 2600.com?
[15] A: No specific person was identified as having done so.
[16] Q: Has anyone ever told you that any of the films that are on
[17] Exhibit 116B ever came from any copy that originally came from
[18] 2600.com?
[19] A: No.
[20] Q: Has anyone ever told you that with respect to Sleepless in
[21] Seattle, that that ever came from a DeCSS download?
[22] A: No.
[23] Q: Has anyone ever told you that any of the films contained
[24] on 116B, told you they got there by virtue of the use of
[25] DeCSS?

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[1] A: No.
[2] Q: Has anyone ever told you that with respect to the Matrix,
[3] that that had DeCCS applied to it?
[4] A: No.
[5] Q: Did you ever ask?
[6] A: No.
[7] Q: Do you know what the resources of the MPA are?
[8] A: I don't, but I would assume they are considerable.
[9] Q: Do you know any studies that the MPA made in November and
[10] October and December of last year in an attempt to determine
[11] when the crack was made?
[12] A: No.
[13] Q: Do you remember testifying on Saturday about documents you
[14] had seen concerning the first cracking of CSS?
[15] A: Yes.
[16] Q: And to your knowledge, when was CSS first cracked?
[17] A: Well, if you are willing to allow me to rely on hearsay,
[18] then it would be 1997.
[19] Q: Now, when you say if I'm willing to allow you to rely on
[20] hearsay, tell me what that hearsay was based on.
[21] A: You want me to rely on the very same kinds of documents
[22] that you objected to when I attempted to testify to them on
[23] direct.
[24] THE COURT: Dr. Shamos, you just answer the
[25] questions. Let Mr. Gold represent his client.

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[1] A: Web pages.
[2] Q: Where were these web pages?
[3] A: Out on the Internet, but I accessed them through a website
[4] at Harvard which is maintaining information about this case.
[5] Q: So, the website at Harvard told you, as I understand it,
[6] that the first CSS crack was in 1997, is that right?
[7] A: Not quite. It wasn't the website at Harvard. It was the
[8] website at Harvard which pointed me to other sources, and in
[9] reading those other sources there seemed to be agreement among
[10] them, there is some dispute, but there is also some agreement
[11] that CSS was first cracked in 1997, ostensibly prior to DeCSS.
[12] Q: Now, do you know what the original site was that the
[13] Harvard site sent you to?
[14] A: There were many of them. I looked at several. I could
[15] probably reconstruct for you which ones they are. Some of
[16] them pointed to articles of a scholarly or semischolarly
[17] nature that I had sent to me and therefore I relied on them.
[18] Q: So, it's been no secret since at least 1997 that CSS has
[19] been cracked, is that right?
[20] MR. SIMS: Objection.
[21] THE COURT: Sustained as to form.
[22] Q: Do you know the way that the MPA searches out websites for
[23] information concerning cracks?
[24] A: No, that wasn't within the five minutes of conversation.
[25] Q: Have you ever seen the documents that were given to

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[1] Mr. Schuman in this case concerning the MPA's investigation of
[2] the CSS crack?

[3] **A:** I have never seen any documents about any MPA
[4] investigation.

[5] **Q:** Do you have any idea how much money and investigative
[6] resources the MPA has spent since November in order to
[7] determine whether there is one single person who ever
[8] downloaded and copied a DVD through DeCSS?

[9] **A:** I would have no way of knowing that.

[10] **Q:** Now, you were talking before a bit about the future. Is
[11] it fair to say, sir, based on your expertise, that in the
[12] future DVDs will probably replace videotapes?

[13] **A:** Yes.

[14] **Q:** And why is that?

[15] **A:** Because the quality is extremely high, the convenience of
[16] using a DVD is much greater, because one can skip around
[17] arbitrarily inside the DVD, which you can't do easily with
[18] videotape, and because DVD has CSS, and there are content
[19] providers that are more willing to provide their content if
[20] they think it can be protected.

[21] **Q:** Do you have any idea of the amount of video sales that
[22] have dropped as the amount of DVD sales have increased?

[23] **A:** I don't.

[24] **Q:** Do you know when the industry predicts that the videos
[25] will be stopping and DVD market will just take over?

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[1] **A:** No.

[2] **Q:** Let's for a minute get to your study. By the way, who
[3] told you to perform this particular study?

[4] **A:** Mr. Hart.

[5] **Q:** This was not an independent research you did at the
[6] university.

[7] **A:** No, it itself isn't directly related to my university
[8] research, although I expect I will be teaching about it
[9] afterwards.

[10] **Q:** It was a specific experiment for the purposes of your
[11] testifying in this litigation, is that right?

[12] **A:** Yes.

[13] **Q:** And they picked you out presumably and modestly because
[14] you were knowledgeable in the area.

[15] **A:** Yes, I think so.

[16] **Q:** And you were given, were you not, precise instructions on
[17] how to carry out this study.

[18] **A:** For that part of what I did, I was given precise
[19] instructions.

[20] **Q:** Tell me what you mean by "precise," and tell me who gave
[21] you those precise instructions.

[22] **A:** Well, I think in my direct testimony I was asked what I
[23] was asked to do in the course of this study, and I listed all
[24] of those instructions, and I thought I identified Mr. Hart as
[25] the person who had asked me to do them.

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[1] **Q:** And you did exactly everything that Mr. Hart asked you to
[2] do, is that right?

[3] **A:** Yes, for that part of the study.

[4] **Q:** You even prepared an affidavit and took out any reference
[5] to the New York Times because Mr. Hart told you to take out
[6] that reference, isn't that right?

[7] **A:** Well, it didn't occur quite that way.

[8] **Q:** Tell me how it — well, let me ask the question then.

[9] Did you originally prepare a document that made some
[10] reference to the New York Times?

[11] **A:** Yes I prepared a computer file on my computer.

[12] **Q:** Does the final document that you have filed in this court
[13] contain any reference to the New York Times?

[14] **A:** No.

[15] **Q:** And was there a conversation between you and Mr. Hart
[16] concerning the deletion of the New York Times from your
[17] affidavit?

[18] **A:** Yes.

[19] **Q:** Why?

[20] **A:** In describing what I did when I went to 2600 News, that
[21] there were a number of sites pointed to by 2600 News, and one
[22] of them was the New York Times, and that wasn't the website
[23] that we obtained the version of DeCSS from, so, one, it seemed
[24] irrelevant to him that I mention the New York Times, but I
[25] think he didn't want the New York Times, because it's a

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[1] newspaper, clouding the case up with First Amendment issues.

[2] That's my impression.

[3] **THE COURT:** Is that what he said or is that your
[4] impression?

[5] **THE WITNESS:** That's my impression.

[6] **Q:** No, no. You testified on Saturday that he used the words
[7] "First Amendment." Do you remember that?

[8] **A:** I recall talking about the First Amendment. I don't
[9] recall that I said that he said that.

[10] **Q:** Who used the words "the First Amendment."

[11] **A:** In my deposition testimony I used the words First
[12] Amendment.

[13] **Q:** And what did Mr. Hart say about making no references to
[14] the First Amendment?

[15] **A:** I don't believe he said anything. I think he said it
[16] would be better to take out the reference to the New York
[17] Times.

[18] **Q:** And you understood why?

[19] **A:** I believe so.

[20] **Q:** And you did.

[21] **A:** I did.

[22] **Q:** Why did you put it in in the first place?

[23] **A:** I don't know. I have been reading the New York Times
[24] since I was a kid.

[25] **Q:** Speaking about the New York Times, when the Napster case

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[1] first came out, was that a matter of great public attention?
[2] **A:** Yes.
[3] **Q:** And when the DVD case came out, this case, was that a
[4] matter of great public attention?
[5] **A:** It appears to have been.
[6] **Q:** And hundreds and hundreds of newspapers carried this story
[7] to your knowledge?
[8] **A:** Carried this? I assume that hundreds and hundreds of
[9] newspapers carried this story.
[10] **THE COURT:** How many of the hundreds did you read?
[11] **THE WITNESS:** I didn't read any. I just assume that
[12] a story of great public interest would be carried through the
[13] Associated Press.
[14] **THE COURT:** If this is really relevant as to how many
[15] newspapers, Mr. Garbus, get on Lexis and find out. Just as
[16] you didn't want this witness giving me a lot of baloney about
[17] how many people have DSL connections based on some impression,
[18] which is a perfectly valid point you made, I don't think it is
[19] helpful to get the same kind of testimony on this.
[20] **MR. GARBUS:** I think this is a different issue.
[21] **Q:** 2600.com, to your knowledge, did they cover the discovery
[22] of the hack back in November?
[23] **A:** I didn't see it back in November. I would surmise that
[24] they did.
[25] **Q:** And how many other websites covered the story, to your

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[1] knowledge, if any?
[2] **A:** I don't have specific knowledge of any at that time, since
[3] I didn't read it from the website at that time, but I wouldn't
[4] be surprised if the number was significant.
[5] **Q:** Have you ever read the Hacker Quarterly?
[6] **A:** I have seen pages from the Hacker Quarterly. I'm not a
[7] regular reader of it.
[8] **Q:** Have you seen pages there referring to the CSS hack?
[9] **A:** I don't recall whether I have. I might have actually in
[10] preparation for this case.
[11] **Q:** And have you seen any back issues where the Hacker
[12] Quarterly talks about the 1977 hack of CSS?
[13] **A:** 1997?
[14] **Q:** Yes.
[15] **A:** No.
[16] **Q:** Now, when you went to HotBot, how many references did you
[17] get to sites that had source code or object code?
[18] **A:** Let me describe how the search was done. The search was
[19] not organized nor would have it been feasible to obtain that
[20] very easily.
[21] What I asked for was all web pages that HotBot
[22] indexes which contained the stream DeCSS. So DeCSS source
[23] code would have come up, articles about DeCSS. Any use of
[24] DeCSS as an acronym totally outside the context of this case
[25] would also have appeared. The number was very large. The

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[1] reason I know it was large is that I abandoned looking at the
[2] hits after I got through a few hundred of them.
[3] **Q:** When was this again?
[4] **A:** This was in preparation for this case, prior to my filing
[5] the declaration.
[6] **Q:** Approximately when in June?
[7] **A:** Within the last month.
[8] **Q:** And at that time did it indicate that 2600.com was posting
[9] the DeCSS object or source code?
[10] **A:** When you say "it," if you mean the list of hits?
[11] **Q:** Yes.
[12] **A:** Yes, I believe 2600.com was one of the hits. I visited it
[13] and saw that it had references to the source code, but I
[14] didn't see the source code itself on 2600.
[15] **Q:** Did you check out any of these sites to see whether or not
[16] there were not merely references to the DeCSS but the actual
[17] object or source code itself?
[18] **A:** Yes, I recall visiting a number of sites that had the
[19] source code.
[20] **Q:** And how many sites did you visit that had the source code?
[21] **A:** A handful, but I would say something like between five and
[22] ten.
[23] **Q:** Was that object and source code?
[24] **A:** The only place I actually recall seeing the object code at
[25] that time was FM4.

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[1] **Q:** Now, you know what Infoseek is.
[2] **A:** Yes.
[3] **Q:** Is that the search engine owned by Disney, one of the
[4] plaintiffs in this case?
[5] **A:** I wasn't aware that it was owned by Disney, but I have no
[6] reason to disbelieve it.
[7] **Q:** Have you ever gone to Infoseek to see how many postings or
[8] references they had?
[9] **A:** I don't use Infoseek.
[10] **Q:** Now, you didn't just get the DeCSS access accidentally,
[11] did you, from 2600.com. You were specifically directed to go
[12] there by the Proskauer firm.
[13] **A:** I was specifically directed to go to the 2600 website and
[14] obtain DeCSS from there, yes.
[15] **Q:** Do you know of anyone other than you who has ever obtained
[16] the source code or the object code from 2600.com?
[17] **A:** I don't know, but I assume that the network administrator
[18] ought to know.
[19] **MR. GARBUS:** I move to strike "I assume."
[20] **THE COURT:** Stricken after "I don't know." Mr.
[21] Shamos, just answer the questions.
[22] **Q:** Let's get to your test for a moment. So after you meet
[23] Proskauer, and after you read the affidavits, and after you
[24] and Mr. Hart had this discussion about the First Amendment,
[25] then what happened?

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[1] A: No, this was not after we had the discussion about the
[2] First Amendment. The test occurred before then.
[3] Q: Okay. Tell me about the test again.
[4] THE COURT: You think you might want to make that a
[5] little more specific.
[6] MR. GARBUS: Okay.
[7] Q: You said that the test had several steps, as I remember.
[8] First you had to find DiVX, is that right?
[9] A: Well, when you say we had to find DiVX, we had to find
[10] #DiVX. That was one of the steps to engage in a chat, to
[11] engage another DiVX.
[12] Q: By the way, how long have you been on computers?
[13] A: Since 1962.
[14] Q: And how much of your day is spent on computers?
[15] A: Oh, a normal day it's huge. More than four hours.
[16] Q: So it's fair to say that with respect to computers or
[17] surfing or the Internet you are fairly — and I know you would
[18] say this modestly — a sophisticated user of computers?
[19] A: I think so.
[20] Q: By the way, you mentioned that you teach corporations
[21] also, is that right?
[22] A: Yes.
[23] Q: And from that you earn about \$700,000 a year?
[24] A: It may turn out to be that this year.
[25] Q: And you teach them about computers and other technologies?

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[1] A: Well, it's more specific than that. I teach —
[2] Q: Tell us what it is.
[3] A: I teach courses in e-commerce technology. That's
[4] typically what the corporations are interested in now. They
[5] are interested in having their people who have been casual
[6] Internet users learn more about how the Internet works, and so
[7] I give a very concentrated crash course that lasts for two
[8] days, consist of ten lectures. It's basically a condensed
[9] version of one of our full courses at Carnegie Mellon
[10] University on that topic. I also give courses to them on
[11] Internet law, and I give a simplified version of the
[12] e-commerce technology course for people who aren't
[13] technologically sophisticated.
[14] Q: Tell me something about the academic qualifications of
[15] your assistant.
[16] A: My assistant has completed or is within one course of
[17] completing a dual degree program at Carnegie Mellon including
[18] receiving a degree in computer science.
[19] Q: Has the computer system in Carnegie Mellon changed very
[20] much with respect to speeds over the last six months?
[21] THE COURT: I think you need to be more specific
[22] about speeds of what.
[23] Q: The LAN, local area network, has that changed?
[24] A: I don't know, but I have not experienced any such change.
[25] Q: Over how long a period of time?

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[1] A: I believe I have had the same level of network access at
[2] CMU for at least the past two years.
[3] Q: So that the same levels of speed that exist today with
[4] respect to LAN are the levels of speed that existed two year
[5] ago?
[6] A: Available to me at CMU, I believe so, yes.
[7] Q: And with respect to students' availability?
[8] A: I believe students' availability has not been increased
[9] during that time.
[10] Q: So, for the last two years —
[11] A: Well, I'm sorry. Students in dormitories.
[12] Q: By the way, how many students does Carnegie Mellon have?
[13] A: Approximately 5,000.
[14] Q: And this may sound strange, but did school end June 15th
[15] this year?
[16] A: School ended actually around the middle of May, but there
[17] are a number of programs that run for 12 months. The
[18] E-Commerce Institute for example is a 12 month program.
[19] Q: You say school basically ends in May. Then when does it
[20] begin?
[21] A: Late August.
[22] Q: So, at the time that you did your study school was
[23] basically out.
[24] A: I don't agree that school was basically out. The
[25] undergraduate program was in recess.

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[1] Q: And how many students are there in the undergraduate
[2] program?
[3] A: About 4,000.
[4] Q: Do you think that based on your expertise that the amount
[5] of usage on the computers when school was out or basically out
[6] is different than when school is in?
[7] A: Yes.
[8] Q: Did you ever state in your report that at the time that
[9] you made these studies Carnegie Mellon University was
[10] basically out of school?
[11] A: I did not so state.
[12] Q: Did anyone at Proskauer ever ask you about whether the
[13] information you put in the report reflected the normal usage
[14] at Carnegie Mellon?
[15] A: No, I don't think there is any reference in there about
[16] normal usage.
[17] Q: Do you have any idea how long it would take to make the
[18] same transmissions in the middle of the school year?
[19] A: No.
[20] Q: By the way, wasn't some of this study done after midnight?
[21] A: Yes.
[22] Q: And tell me why? Is there a difference with respect to
[23] the number of people who use the Internet in the middle of the
[24] day and after midnight?
[25] A: Yes.

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[1] Q: Did you say in your report what time you conducted these
[2] studies?

[3] A: No. The studies were conducted at various times during
[4] the day. I can state that no particular effort was made —

[5] MR. GARBUS: Can I ask the question? Judge, may I?

[6] THE COURT: Yes, of course.

[7] Q: Did Mr. Hart tell you at what time he wanted these studies
[8] conducted?

[9] A: No.

[10] Q: Did you know that to conduct the studies after midnight,
[11] when school is out, would bring you a different result than
[12] conducting these studies when school is in session during the
[13] middle of the day?

[14] A: Well —

[15] Q: Just answer that yes or no, please.

[16] A: Do I know that there is a difference?

[17] Q: Yes.

[18] A: Yes.

[19] Q: So —

[20] THE COURT: We will take the afternoon break here,
[21] about ten minutes.

[22] DEPUTY COURT CLERK: All rise.

[23] (Recess)

[24] THE COURT: The witness has just indicated to me that
[25] if there is any possibility, Mr. Garbus, that you could finish

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[1] today, he would be grateful. And I would be prepared to stay
[2] a little later if that will accommodate him. I don't know
[3] whether it will or not. I would do that for anybody. So, you
[4] will let me know. Proceed.

[5] BY MR. GARBUS:

[6] Q: You were mentioning your assistant Eric before.

[7] A: Yes.

[8] Q: Did he become your assistant because he was an especially
[9] qualified student in this area?

[10] A: Well, when you speak of "this area" I can tell you how he
[11] became my assistant. He is my assistant for two purposes. He
[12] has worked for me for two and a half years on the Universal
[13] Library project, and in fact his involvement with that project
[14] predated my return to Carnegie Mellon University in 1998.

[15] He was already doing some work as a college sophomore
[16] at the Universal Library, and then I became his college
[17] supervisor and we worked closely together in the last two and
[18] a half years.

[19] When I was asked to become involved in this case, it
[20] clearly involved somebody who was familiar both with the video
[21] technology, the Internet and somebody who had the right
[22] vocabulary to be able to participate in activities resulting
[23] in the collection of DiVXs, and Eric, of all the people I know
[24] at Carnegie Mellon University, was the best suited person to
[25] do that.

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[1] Q: So, it took the two of you highly qualified people in the
[2] middle of the summer, when school was out, in the early
[3] morning hours, approximately 20 hours to download the DVD and
[4] send it, is that right?

[5] A: That's not quite correct. As you have stated, obviously
[6] if something took 20 hours, it couldn't have all been in the
[7] middle or early morning hours.

[8] Q: Thank you. Now tell me the timing when this started,
[9] because I didn't see it in your report.

[10] A: We purchased a computer on Friday afternoon, had it back
[11] at the university at 3 p.m. and immediately began the steps
[12] involved at that time.

[13] Q: Is there any document which indicates you started at 3
[14] p.m.

[15] A: No.

[16] Q: Who told you what kind of computer to buy?

[17] A: No one did. We needed a computer that was clean and had
[18] the capability to do what we were being asked to do.

[19] Q: Who?

[20] A: Mr. Hart. As I testified, he didn't tell me what kind of
[21] computer to get. He told me to get a computer that would be
[22] able to do the following things. We went to Comp USA,
[23] reviewed the ones that were in stock and available and bought
[24] one which could do the job.

[25] Q: And this was done on the week before the July 4th weekend,

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[1] is that right?

[2] A: That is my recollection.

[3] THE COURT: So this was the Friday that commenced the
[4] holiday weekend, is that correct?

[5] Q: Is that right, sir?

[6] A: I'll have to review. Yes.

[7] THE COURT: So this was done in the early morning
[8] hours over the 4th of July weekend?

[9] THE WITNESS: No, it was — I —

[10] THE COURT: You might even have gotten technical
[11] support on the phone.

[12] MR. SIMS: Your Honor, I think —

[13] A: Yes, I left for vacation early morning Saturday, July 1.
[14] I wrote the affidavit on June 30, and so I had sent off the
[15] affidavit prior to my leaving for the 4th of July weekend, so
[16] it was all completed before then.

[17] Q: I'm not clear. Maybe you answered the question to the
[18] Judge, but I didn't hear it. So this was done on a Friday?

[19] A: My recollection is that that's the day that we purchased
[20] the computer.

[21] Q: Have you ever before been in your lab or in your office on
[22] a July 4th weekend at 3 or 4 in the morning to conduct any
[23] kind of tests?

[24] MR. SIMS: It misstates the testimony. The witness
[25] has indicated on Friday, the 23rd.

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[1] **THE COURT:** Sustained. Sustained.
[2] **THE WITNESS:** Something hardly seems right to me
[3] about this, because if — June 30 was a Friday. It's
[4] impossible for us to have purchased the computer the afternoon
[5] on Friday and had all of this completed by Friday.
[6] **Q:** What are you referring to, by the way?
[7] **A:** The document I'm referring to? I'm looking at my own
[8] declaration. So, we must have purchased the computer prior to
[9] that, probably the previous Friday.
[10] **Q:** Okay. And tell me what happens after you purchased the
[11] computer. I'm sorry to be slow about this but ...
[12] **A:** I went through all this on direct. We purchased the
[13] computer.
[14] **Q:** But some of this you didn't go through on direct.
[15] **A:** Well, I think I went through the steps but...
[16] **THE COURT:** Let's not argue about whether you did.
[17] Let's just do it.
[18] **A:** After getting the computer and buying the DVDs at Comp
[19] USA, we immediately returned to Carnegie Mellon University,
[20] set up the computer, connected to the network and went through
[21] all of the steps involved in obtaining DeCSS and running DeCSS
[22] to obtain a DeCSS'd copy of Sleepless in Seattle.
[23] **Q:** When you say "we" it's you and Eric together at this time?
[24] **A:** Yes.
[25] **Q:** So you and Eric buy the computer, you and Eric download

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[1] the programs, you and Eric get the DeCSS?
[2] **A:** Yes, and we DeCSS'd Sleepless in Seattle.
[3] **Q:** Had you ever gotten DeCSS before?
[4] **A:** No.
[5] **Q:** Had you ever used any of the other programs such as DVD
[6] Rip?
[7] **A:** No.
[8] **Q:** Do you know what it is?
[9] **A:** Yes.
[10] **Q:** What is it?
[11] **A:** DVD Rip is a program that creates DiVXs from DVD.
[12] **Q:** Do you know how long it takes to create a DiVX from a DVD
[13] with DVD Rip?
[14] **A:** No.
[15] **Q:** Do you know if it's ten times faster than using DeCSS?
[16] **A:** No.
[17] **Q:** Did you ask anybody at Proskauer whether or not there
[18] weren't other "copying techniques" that were ten to 20 times
[19] faster than DeCSS?
[20] **A:** No.
[21] **Q:** Was it worth your while to get a free copy of Sleepless in
[22] Seattle, to spend 20 hours working through the night over the
[23] weekend?
[24] **MR. SIMS:** Objection.
[25] **THE COURT:** Sustained.

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[1] **A:** Well —
[2] **Q:** Can you think of anybody in their right mind —
[3] **THE COURT:** Sustained. I'm afraid of the answer.
[4] **Q:** Do you know anything about DOT Stripper?
[5] **A:** Yes. I don't think there is a T in it, but I've heard of
[6] it.
[7] **Q:** What does that do?
[8] **A:** It appears to be another program that rips DiVX.
[9] **Q:** And do you know how long it takes that program to do it?
[10] **A:** No.
[11] **Q:** Have you ever done it?
[12] **A:** No.
[13] **Q:** How about your assistant Eric, has he ever done that?
[14] **A:** I don't know.
[15] **THE COURT:** When you say it rips DiVXs, what exactly
[16] do you mean?
[17] **THE WITNESS:** It creates DiVXs from an MPEG2 stream,
[18] video stream.
[19] **Q:** You said on Saturday one of the reasons you chose Eric was
[20] because he also knew something about the piracy underground
[21] and where to get information. Do you recall that?
[22] **A:** Yes.
[23] **Q:** Tell me what Eric knew and tell me why that was relevant
[24] to this inquiry.
[25] **A:** Okay. Of course in the two and a half years that I have

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[1] known Eric we have engaged in many conversations. He has
[2] occasionally invited me into his office to say something like,
[3] hey, take a look at this. And in fact only a few months ago,
[4] before I had heard about this case, he hurriedly called me
[5] into his office and said, what do you think of this? And I
[6] was watching a video movie, and I asked him at what bit rate
[7] it is required for you to get something of this quality, and
[8] he said 500 kilobits, and I didn't believe it and he explained
[9] to me how it was done, and it was a DiVX.
[10] **Q:** Is one of the reasons that you chose Eric was because he
[11] had this background of knowing the underground Internet world,
[12] as it were?
[13] **A:** That was one of the reasons. I had to review all of the
[14] people that I knew that I could engage on a relatively rapid
[15] basis on this project because of the time frame, and Eric was
[16] the ideal one.
[17] **Q:** Do you know what a ripper is?
[18] **A:** I have heard of it.
[19] **Q:** Have you ever used it?
[20] **A:** No.
[21] **Q:** Do you know how long, has anyone ever told you how long it
[22] takes you utilizing that to make a DVD?
[23] **A:** No.
[24] **Q:** Do you know if it's ten times as fast as DeCSS?
[25] **A:** No.

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[1] **Q:** Have you ever heard of Read DVD?
[2] **A:** No.
[3] **Q:** Have you ever heard of CSS Cat?
[4] **A:** No.
[5] **Q:** Have you ever heard of CSS Auth., A-U-T-H?
[6] **A:** Not a level where I could say anything about it. I may
[7] have encountered the word.
[8] **Q:** In any event, these things you haven't heard of I presume
[9] you never used?
[10] **A:** I presume so too.
[11] **Q:** How about CSS Descramble?
[12] **A:** No.
[13] **Q:** How about something called Anonymous Source, have you ever
[14] heard that term before?
[15] **A:** I have heard the term. I don't know what it means.
[16] **Q:** Do you know what the speed of CMU's Internet connection
[17] was two years ago?
[18] **A:** I'm assuming that the Internet connection available to me
[19] was probably the same speed that it was two years ago.
[20] **Q:** And students?
[21] **A:** Students — everybody at CMU, we have only one gateway to
[22] the outside world, and it's through the Pittsburgh Super
[23] Computer Center, so everybody goes out the same way.
[24] **Q:** Would that be the same four years ago both with respect to
[25] CMU Internet speed and LANS?

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[1] **A:** I don't know.
[2] **Q:** Now, with respect to these other universities, do you know
[3] whether or not their Internet speeds have changed or their LAN
[4] speeds have changed over the last four years?
[5] **A:** The general trend is that people's LAN speeds and people's
[6] Internet speeds are increasing. I don't have specific
[7] knowledge about other universities.
[8] **Q:** Why is it that CMU's is not if everyone else's is
[9] increasing?
[10] **A:** The first question you asked me is over the past two
[11] years. The second question is over the past four years.
[12] **Q:** Let's make it over the last two years. To your knowledge,
[13] isn't it true that LAN speeds and Internet speeds over the
[14] major universities have not changed?
[15] **A:** I don't know that.
[16] **Q:** Do you know what Northern Lights is?
[17] **A:** Northern Light is a search engine.
[18] **Q:** Did you ever look on Northern Light to see whether or not
[19] they had mirror codes or any references to DeCSS?
[20] **A:** No, HotBot is my default search engine.
[21] **Q:** Would it surprise you to learn that there are over 700,000
[22] references on Northern Light?
[23] **MR. SIMS:** Objection. It assumes facts not in
[24] evidence.
[25] **THE COURT:** Well, it's cross. I mean obviously the

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[1] question is no evidence of the facts.
[2] **A:** It would not surprise me to learn that there are 700,000
[3] pages on the web that have the stream DeCSS in them.
[4] **Q:** Of those 70,000 pages would it surprise you to learn that
[5] 300,000 are mirror sites?
[6] **MR. SIMS:** That really does assume facts not in
[7] evidence.
[8] **THE COURT:** It depends on what would surprise him.
[9] If it surprises him that pigs fly, it doesn't prove that pigs
[10] fly.
[11] **A:** It would surprise me because that number seems huge to me.
[12] **Q:** Do you have any idea as you sit here today how many sites
[13] in the United States have DeCSS in object or source code?
[14] **A:** No.
[15] **Q:** As you sit here today, do you have any knowledge about how
[16] many sites outside of the United States have DeCSS in object
[17] or source code?
[18] **A:** No. There are at least some.
[19] **Q:** By the way, after you went to your HotBot, did it occur to
[20] you to go to any other search engines?
[21] **A:** I did actually go to Google, G-O-O-G-L-E.
[22] **Q:** Thank you very much. And what did Google indicate?
[23] **A:** Google indicated a large number of sites having pages
[24] containing the stream DeCSS.
[25] **Q:** How many pages?

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[1] **A:** I don't know.
[2] **Q:** More or less than 10,000?
[3] **A:** I don't know.
[4] **Q:** Did you go to Yahoo?
[5] **A:** No.
[6] **Q:** Does AOL have a search engine?
[7] **A:** I believe AOL licenses a search engine from outside. A
[8] search capability is available through AOL.
[9] **Q:** Did anyone at the MPAA or at Proskauer ever tell you that
[10] the Disney search engines Infoseek and Go link to mirror sites
[11] of DeCSS and CSS?
[12] **A:** No.
[13] **Q:** Now, do you know the Internet connection from Carnegie
[14] Mellon University to the Internet?
[15] **A:** Well, it depends what you mean. There is a very fast
[16] connection between CMU and the Pittsburgh Super Computer
[17] Center. The Pittsburgh Super Computer Center routes through a
[18] number of back bones in the United States. I am not familiar
[19] with the speeds of those back bones, but in general they are
[20] very high.
[21] **Q:** Are they the same that existed two years ago?
[22] **A:** I don't know.
[23] **Q:** When you say it's very fast —
[24] **A:** Yes.
[25] **Q:** — do you have any sense of what that is?

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[1] A: Well, CMU is an advanced technological university with a
[2] world wide reputation in computer science. We try to have the
[3] best stuff and as fast communications as we can rationally
[4] afford.
[5] Q: Isn't it fair to say that CMU is one of the leading
[6] schools in the United States with respect to this entire area
[7] and has one of the best Internet and LAN connections in the
[8] United States?
[9] A: Yes, but it's by no means unique.
[10] Q: Getting back to your test again. After you downloaded
[11] DeCSS — and as I understand it, from the time you found the
[12] DiVX until you downloaded the DeCSS was about an hour, 30
[13] minutes for each process.
[14] A: It was between 30 minutes and an hour. It was about 45,
[15] the total the first time we did it.
[16] Q: Then you went to the tutorial, is that right?
[17] A: Wait a minute. The first thing that we did is to go from
[18] the DVD to run DeCSS to produce the DeCSS version of the DVD.
[19] That was the part that took 45 minutes the first time.
[20] Q: Right. Then what happened?
[21] A: Then we attempted to make the DiVX by going to —
[22] Q: Was that at the same time, right afterwards or a different
[23] day different time?
[24] A: It was later the same day.
[25] Q: Can you tell me what time that was?

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[1] A: My recollection is that it was late.
[2] Q: What time?
[3] A: Well, approximately 10 o'clock at night.
[4] Q: So, let me see if I understand. So at 10 o'clock at night
[5] you and Eric went where to do this?
[6] A: We didn't go anywhere. We were where we were. He was in
[7] his office and I was in my office.
[8] Q: 10 o'clock at night.
[9] A: Yes.
[10] Q: And had you prior to that time — what time had you
[11] finished the other process, namely obtaining the DeCSS?
[12] A: The first Sleepless in Seattle DeCSS was finished in the
[13] afternoon, approximately 5 p.m.
[14] Q: Let me see. I think I may be getting confused.
[15] With respect to the first film Sleepless in Seattle,
[16] about what time did you get the DeCSS onto your computer?
[17] A: About 5 p.m.
[18] Q: Okay. And then you started to deal with DiVX at 10
[19] o'clock that night, is that right?
[20] A: Yes.
[21] (Continued on next page)

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[1] Q: And had you and Eric made an appointment to do it at 10
[2] o'clock that night?
[3] A: No.
[4] Q: Why didn't you start it at 5 o'clock as soon as you had
[5] DeCSS?
[6] A: Because we were both busy with many other things going on
[7] at the same time and I had to spend time preparing some
[8] lectures. I just wasn't available to do it at that time and I
[9] recall that he had to eat.
[10] Q: So, it's now 10 o'clock at night. This is Friday night
[11] and where are you?
[12] A: Again, I don't recall whether it was Friday night. That
[13] seems inconsistent with the scheduling. It might have been
[14] Tuesday night. I'm going to have to check the sales receipt
[15] on the computer. That will tell us the date that it began.
[16] Q: Do you have that with you?
[17] A: No, it's on my mantle in my bedroom at home.
[18] Q: Now, so let's assume it's 10 o'clock at night now. It's
[19] you and Eric, is that right?
[20] A: Yes.
[21] Q: Then what happens?
[22] A: Then what happens is the process of learning how to do
[23] DiVXs begins from FM4.org.
[24] Q: The process of learning?
[25] A: Yes.

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[1] Q: This was the first time you had ever done it?
[2] A: Yes.
[3] Q: So, you had to learn it?
[4] A: Well, I certainly had never done it before.
[5] Q: Had Eric ever done it?
[6] A: I don't know, but what we wanted to do was to go through
[7] this as if we had done nothing about it, so we wouldn't be
[8] making any implicit use of his expertise.
[9] MR. GARBUS: I presume Eric is out of the room
[10] because he's a potential witness or we think it's a potential
[11] witness, but pending a resolution of that wish, I would hope
[12] that he's not in the room.
[13] MR. SIMS: I don't know whether he's in the room or
[14] not.
[15] THE COURT: He's just leaving.
[16] MR. GARBUS: Can I hear the last question, please?
[17] (Record read)
[18] Q: Let me see if I understand? So, at this point, you don't
[19] know whether he's done it or not, is that right?
[20] A: That's right.
[21] Q: So, it may be that prior to this time, he's done it 30
[22] times or never, is that right?
[23] A: Yes.
[24] THE COURT: I think we all know what "don't know" is.
[25] MR. GARBUS: I sometimes do.

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[1] Q: Now, tell me how long did it take you to do the tutorial?
[2] A: To do the tutorial? O.K., the process of creating the
[3] DiVX was done in pieces. There are a number of steps that you
[4] have to remember, as I testified before, using the exhibits.
[5] The most part of the process is merging the audio and
[6] video, which is largely a trial and error process. The
[7] various steps were broken up. This wasn't done in 20 hours
[8] consecutively at a time.
[9] Q: You say it's a trial-and-error process?
[10] A: Yes.
[11] Q: The fact that Eric, whatever expertise — he brought
[12] whatever expertise he had to this, certainly made the trial
[13] faster and the errors fewer, is that right?
[14] A: Assuming he brought relevant expertise, which I don't
[15] know.
[16] Q: Now, did you also, as you were going through this, learn
[17] something about the tutorial?
[18] A: Yes.
[19] Q: And how long were you on the tutorial?
[20] A: The tutorial can be read in easily within 15 minutes.
[21] Q: And you and Eric were both there reading it?
[22] A: I read pieces of it with him and sat there with him while
[23] we were engaging in some of the steps. Others, I went off to
[24] my own office and read.
[25] Q: It would be very helpful if you could just tell me when

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[1] "we" means you and Eric or "he" means you and Eric, or
[2] whatever. Tell me when you're there and where Eric is there.
[3] A: O.K., of the 20-hour process, my participation in it was
[4] heavy at the beginning and sporadic thereafter until it was
[5] completed.
[6] Q: So, it's now 10 o'clock. You had gone through the
[7] tutorial, then what happens?
[8] A: We began the initial steps together. We did not complete
[9] the final steps together. Eric did that.
[10] Q: Now, you say there are difficulties in synchronization?
[11] A: Yes.
[12] Q: And tell me what those difficulties are?
[13] A: The difficulties are that after applying the tools that
[14] are listed on FM4, you end up with a separate audio track and
[15] a separate video track.
[16] The audio track and video track have to be
[17] synchronized together so that when people are speaking, the
[18] sounds correspond to the movement of their mouths. There a
[19] are apparently many effects that occur that make it difficult
[20] to cause the synchronization to happen. In fact, there may
[21] even apparently be some DVDs that one can DiVX properly
[22] because you can't get the synchronization error.
[23] In the particular case of Sleepless in Seattle, we
[24] believe it had to do with the difference in frame rate between
[25] the trailer and the movie proper.

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[1] Q: So, if you can't do that synchronization with respect to
[2] the — with respect to the DiVX, that means with respect to
[3] certain films, that means DeCSS is useless with respect to
[4] certain films?
[5] A: No, I don't say that. Because it's not my understanding
[6] that following the steps from FM4 is the only way to create a
[7] DiVX from a DeCSS DVD.
[8] Q: To your knowledge then how long — by the way, had you
[9] ever — I presume you had never prior to this time attempted
[10] the synchronization process?
[11] A: No, I never have.
[12] Q: To your knowledge, had he ever attempted synchronization
[13] process?
[14] A: I think he had.
[15] Q: And how many times had he done that?
[16] A: I don't know.
[17] Q: So, he was somewhat expert at it?
[18] A: I'm not sure that it would be right to say he was expert
[19] at it. He may have had relevant expertise and may have done
[20] it sometimes. I don't know how many times. He's generally
[21] familiar with the problem of synching audio and video, that is
[22] true.
[23] Q: And do you have reason to believe that without Eric, you
[24] would have been able to do the synchronization?
[25] A: I believe I would have been able to do it.

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[1] Q: And how long would you think — withdrawn.
[2] How long did the synchronization process take?
[3] A: About 10 out of the 20 hours.
[4] Q: And tell me what's involved in that process.
[5] A: What one has to do is run some tools, try out the result,
[6] pick various pieces of sound track and try and match them up
[7] with the video track, merge them together, take a look after
[8] them, see if they are in ink. If they aren't, go back, make
[9] an adjustment, do it again. That's what I meant by "trial and
[10] error."
[11] Q: Would you agree with me that that's very tough stuff?
[12] A: It is not fun.
[13] Q: Not only not fun, it's very, very difficult; isn't it?
[14] A: Well, very, very difficult is relative. It's a lot easier
[15] than making the movie in the first place.
[16] MR. GARBUS: Thank you very much.
[17] Q: Now, when he was trying to do this for the 10 hours — by
[18] the way, the synchronization process, if you do DVD rip, do
[19] you have to do that?
[20] A: I don't know.
[21] Q: If you do DVD ripper, do you have to do that?
[22] A: In general, the result is separate audio and video stream,
[23] then you have to synchronize them. If the result is something
[24] else, then you don't.
[25] Q: Now, with respect to this 10 hours that he was there, how

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[1] much of that time were you there?

[2] A: I wasn't there during that 10 hours.

[3] Q: So, you start at 10:00 o'clock at night, I gather he's
[4] working until — let's say 10 hours would mean 8 in the
[5] morning, is that right?

[6] A: No, no. I think I testified that the various pieces of
[7] creating the DiVX'd were done in separate chunks. They were
[8] not done 20 hours consecutively.

[9] Q: So, it's 10 o'clock some night, let's say either Tuesday
[10] or Friday. Let's call it X night. Then when we go — let's
[11] call it night No. 1. Is that all right?

[12] A: Yes.

[13] Q: Now, let's go to day No. 2.

[14] A: Yes.

[15] Q: Tell me what happens.

[16] A: I don't recall. I don't — there were so many things were
[17] going on at the same time, I don't remember the different
[18] times that I stopped in to Eric's office to find out what
[19] particular step was in process at that time. I can't put that
[20] together for you.

[21] Q: So, but on day 2, I'm just having trouble. It's 10
[22] o'clock at night. At some time, do you leave that office or
[23] does he leave that office?

[24] A: It was done in his office, so you would be the one to
[25] leave.

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[1] Q: So, he's there at 10 o'clock on night on day 1. What time
[2] does he leave the office?

[3] A: I don't know.

[4] Q: Are there any notes that are made about when he leaves the
[5] office?

[6] A: I don't have any. It's possible that he might, but I
[7] doubt it.

[8] Q: So, after he leaves the office, then what happens? Do you
[9] see him the next day?

[10] A: Yes.

[11] Q: And what time on day 2 do you see him?

[12] A: I don't recall.

[13] Q: And when you see him, has he gone through this 10-hour
[14] process?

[15] A: No, there are still more steps to do.

[16] Q: How much has he done the first time that you see him?

[17] A: My recollection is that when I saw him, I said, how is it
[18] going? He said, it's going fine. I said, is it done? No,
[19] there's a lot to do yet.

[20] My involvement during this process was largely
[21] getting and cajoling and making sure that he was actually
[22] working on it and getting toward a conclusion.

[23] Q: And when did he have the conclusion of the
[24] synchronization?

[25] A: I don't recall that either. However, we can probably

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[1] reconstruct it easily because the — it was right after he

[2] completed it when we attempted to the trade with eaRoSoL.

[3] Q: And when is that?

[4] A: So, now I see from the declaration that the log of that is
[5] Tuesday, June 27th. So, the Fridays that we are talking about
[6] were the week prior to the start of the July 4th weekend.

[7] Q: So that Tuesday, July 27th, that's day 1?

[8] A: No, Tuesday July 27th is when we engage in the Internet
[9] relay chat to try to trade the DiVX. We couldn't trade the
[10] DiVX until we had the DiVX, so it was done by then.

[11] Q: So, it's June 27th that you're starting to do the chat, is
[12] that right?

[13] A: Yes.

[14] Q: Now, how do you know that it took 10 hours from 10:00 p.m.
[15] the night before to the time you do the chat to do the DiVX'd?

[16] A: I asked Eric how long it took him to do the
[17] synchronization, how much of the 20 hours he spent. He said,
[18] 10 hours.

[19] Q: And you never saw how many hours he spent at what time or
[20] anything like that?

[21] A: No.

[22] Q: And you never asked him for any report, is that right?

[23] A: I certainly never asked him for any written report. I
[24] certainly asked him to narrate to me the steps that he took.

[25] Q: Did you know that you were being asked to prepare this

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[1] information for the purposes of filing an affidavit in court?

[2] A: Yes.

[3] Q: Did you know that you were being asked to prepare this
[4] information for the purpose of testifying in court?

[5] A: I assumed I would be called to testify.

[6] Q: Did anybody at the Proskauer firm suggest to you that you
[7] keep time sheets?

[8] A: No.

[9] Q: Did anybody at the Proskauer firm suggest to you that you
[10] use Eric or was that your idea?

[11] A: They didn't know Eric. It was completely my idea.

[12] Q: When for the first time did they learn that your assistant
[13] or associate had participated in this test?

[14] A: O.K., I think that when Mr. Hart gave me an outline of
[15] what he wanted us — what he wanted me to do, I said, I'm
[16] going to have to engage an assistant to do this. And he said,
[17] O.K.

[18] Q: He didn't say, keep any records?

[19] A: Yes.

[20] Q: Of the experiment?

[21] A: No.

[22] Q: So, with respect to whether it's 10 hours, 20 hours or 60
[23] hours, all that we have is either your word or your
[24] assistant's words?

[25] A: That's right, along with individual pieces of documentary

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[1] evidence like the IRC log.
[2] **Q:** Now, with respect to the IRC log, is the entire log here?
[3] **A:** No, I've testified already about exactly how this log
[4] differed from the other log in the creation of this log and
[5] the addition, subtraction of the single first line on this.
[6] **Q:** Where is the rest of the log?
[7] **MR. SIMS:** Objection. The witness' testimony is
[8] clear. This is the entire log that was transcribed with
[9] respect to the Matrix.
[10] **THE COURT:** Is that right, Mr. — Dr. Shamos?
[11] **THE WITNESS:** O.K., there are two logs. There's a
[12] log of the initiation of the IRC session when there are a
[13] bunch of people, more than two people in the chat room
[14] talking, then after you engage with a single person, there's a
[15] separate log of the so-called private conversation that takes
[16] place. This is the complete log of the private conversation.
[17] **Q:** And where — and is there another log of the other
[18] conversation?
[19] **A:** I believe there is.
[20] **Q:** And where is that?
[21] **A:** If it exists, it would be on the laptop.
[22] **Q:** Would you please produce it?
[23] **MR. SIMS:** Your Honor, at lunchtime, we provided
[24] that. We showed that log to Mr. Hernstadt at least in part.
[25] We made arrangements. It contains some items relevant to

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[1] other matters other than this lawsuit and this engagement and
[2] we made arrangements to make it available with those excisions
[3] after we leave today.
[4] **THE COURT:** All right.
[5] **MR. GARBUS:** I'm sorry. I wasn't part of that
[6] conversation. Which excisions?
[7] **MR. SIMS:** The ones that have nothing to do with this
[8] lawsuit and an engagement by Proskauer.
[9] **MR. GARBUS:** I would ask that those documents be
[10] given to the Court and the Court make the determination about
[11] whether or not we are entitled to see it.
[12] **THE COURT:** I'm going to accept the representation
[13] unless I see some reason not to.
[14] **Q:** Now, after the first 10 hours, then what happens?
[15] **A:** Well, the first 10 hours of the DiVX'ing process takes us
[16] up to the point where the multiplexing needs to occur and
[17] that's where the trial-and-error part of that process begins.
[18] **Q:** On the log that we have which is in your exhibit there is
[19] certain information redacted.
[20] **A:** The log of what?
[21] **Q:** It's the log which is attached to your affidavit.
[22] **THE COURT:** What exhibit are you referring to,
[23] Counsel?
[24] **MR. SIMS:** Your Honor, as you've seen, the exhibit
[25] that we moved into evidence has no redactions.

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[1] **THE COURT:** 115A is what I understand we have been
[2] discussing as "the log."
[3] **MR. GARBUS:** The affidavit that we had originally
[4] been given had redactions, I gather, of the exhibit.
[5] **MR. SIMS:** Your Honor, Mr. Garbus has had the
[6] unredacted copy more than a week.
[7] **MR. GARBUS:** Pardon me?
[8] **THE COURT:** Look, I really don't have to have any of
[9] this. Mr. Garbus, rather graciously acknowledged that he was
[10] looking at the wrong piece of paper and I don't need any of
[11] this.
[12] **Q:** Let me show you Defendant's Exhibit BBH and at page —
[13] **MR. SIMS:** May I have a copy?
[14] **MR. GARBUS:** Pardon me?
[15] **MR. SIMS:** May I have a copy?
[16] **THE COURT:** I would like a copy too, Mr. Garbus.
[17] Thank you.
[18] **Q:** And the first sentence VaioBoy, "Anybody have any DiVX's
[19] to trade for Sleepless in Seattle?"
[20] **A:** Yes.
[21] **Q:** Did that come off a log?
[22] **A:** No, I explain that in deposition and earlier in testimony
[23] today.
[24] **Q:** So, in other words, you typed that in, although it wasn't
[25] there originally in the log, is that right?

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[1] **A:** That's correct.
[2] **Q:** And why did you do that?
[3] **A:** I typed it in because Eric told me that's what the
[4] statement that he made on IRC chat and it was necessary to
[5] make the log make sense.
[6] **Q:** Now, did you in your declaration indicate that any part of
[7] the log had been typed in and did not reflect what the log
[8] itself was?
[9] **A:** No.
[10] **Q:** When you spoke to Mr. Hart, did you and he discuss whether
[11] or not that was an accurate transcript —
[12] **A:** No —
[13] **Q:** — of the log?
[14] **A:** No.
[15] **Q:** Did Mr. Hart know that that first sentence in the log did
[16] not appear in the log?
[17] **A:** I don't believe he knew that.
[18] **Q:** So, now we are into — we have synchronized it and then
[19] what happens?
[20] **A:** We play it to verify that it's synchronized and then we
[21] are ready to trade.
[22] **Q:** Who's the "we"?
[23] **A:** Eric and I, because he, after he was done, he was
[24] naturally excited to tell me so and he came and got me in my
[25] office and we looked at the result, the DiVX'd.

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[1] Q: He was excited because he achieved something that was very
[2] difficult?
[3] A: I don't know why he was excited. I presume he was excited
[4] because he knew he had achieved the result that we were after.
[5] Q: And what was the result you were after?
[6] A: A DiVX'd of a decrypted DVD.
[7] Q: And at that time, do you know whether or not that had
[8] originally — withdrawn.
[9] So, what time are we now on, day 2?
[10] A: As I say, I don't recall.
[11] Q: And after he tells you he synchronized it, that took 10
[12] hours, and then what happens?
[13] A: Then it's time to trade with whoever we can get to trade
[14] another DiVX for ours.
[15] Q: And what time do you start to trade?
[16] A: Approximately between 11 and midnight.
[17] Q: 11 and midnight during the time when — I won't belabor
[18] it — school is out?
[19] THE COURT: I got it the first time, Mr. Garbus.
[20] MR. GARBUS: I just wanted to know it's out every
[21] day.
[22] Q: So, it's 11 o'clock at night and we have Eric sitting in
[23] his office?
[24] A: Yes.
[25] Q: And where are you?

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[1] A: I'm in his office.
[2] Q: And then what happens?
[3] A: He says, I'm going to try to find somebody we can trade
[4] with. He goes off and does so. I come back a little while
[5] later while he's in the middle of this chat session. I was
[6] fascinated by the dialogue.
[7] Q: Can I ask you something, just so I get it clear. So, the
[8] trading then is four days after all this starts?
[9] A: As I say, I have to check the record of when we purchased
[10] the computer to know on the date on which this starts.
[11] Q: But is it your best memory now that it takes from the time
[12] you purchase the computer to the time you start trading the
[13] four days?
[14] A: It's not my best recollection. It isn't my recollection.
[15] It's possible that it was. But it did not involve continuous
[16] work because both of us had many other things to do at the
[17] same time.
[18] Q: Now, so you start trading at 11 o'clock at night?
[19] A: Yes.
[20] Q: Then what happens?
[21] A: Well, after Eric made the deal with eaRoSoL to do the
[22] trading, he initiated the simultaneous upload and download and
[23] I repaired to my office to finish up some work.
[24] Q: Do you know the speed of the eaRoSoL connection?
[25] A: We don't know the speed of the connection. We have

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[1] surmised about the speed of the connection. We know the speed
[2] that was actually achieved during the transfer.
[3] Q: Now, let me ask the question again. Do you know the speed
[4] of the connection?
[5] A: No.
[6] THE COURT: He said no.
[7] Q: Do you know to what extent the theoretical capacity of the
[8] speed was utilized?
[9] A: From our surmise, we believe it was approximately a third.
[10] Q: And this is at — were you there while the conversation
[11] was going on on the chat room?
[12] A: Yes, for part of it.
[13] Q: For how long did it go on in the chat room?
[14] A: Oh, it was reasonably short time.
[15] Q: How long?
[16] A: I don't know. I wasn't there for the entire time. I
[17] stayed for a few minutes of it and was interested in the
[18] VaioBoy handle and some of the language that was being used in
[19] the transcript.
[20] Q: Do you recall testifying at your deposition?
[21] THE COURT: Excuse me, Mr. Garbus. Before you ask
[22] that question.
[23] The log, what you've identified as the log,
[24] Plaintiff's Exhibit 115A says: Start time: 2315. Session
[25] closed: 2342. Would I be wrong in concluding that the

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[1] duration of the dialogue was 27 minutes or can you not tell
[2] that from this?
[3] MR. GARBUS: I would ask Mr. Shamos.
[4] THE COURT: I'm asking the witness, Dr. Shamos.
[5] THE WITNESS: Oh, yes, the times in the log have not
[6] been altered.
[7] THE COURT: That wasn't the question.
[8] THE WITNESS: You would be correct in presuming that
[9] that was the duration of the chat.
[10] THE COURT: O.K. Go ahead.
[11] MR. GARBUS: As I recall, this Court has rules about
[12] with respect to reading from deposition?
[13] THE COURT: Yes.
[14] MR. GARBUS: You're not supposed to say, you're just
[15] supposed to read the question?
[16] THE COURT: Go ahead.
[17] BY MR. GARBUS:
[18] Q: You just said you were there at the IRC conversation for a
[19] while. Page 245: "When did you leave? Were you there for
[20] any of the IRC conversations?"
[21] THE COURT: Mr. Garbus, for the reporter's sanity,
[22] when you do read, read the "Q" and read the "A" so she knows
[23] when; you're quoting.
[24] Q: Page 245:
[25] "Q. When did you leave?"

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[1] Line No. 11, my colleagues —
[2] “Q. When did you leave? Were you there for any of
[3] the IRC conversations?
[4] “A. No.”
[5] Q: Do you recall giving that answer back on July 16th which I
[6] think was yesterday?
[7] A: I don’t recall giving that answer. I must have misspoke.
[8] Q: When? Yesterday or today?
[9] A: Yesterday.
[10] Q: Now, had you ever been on an IRC chat room before?
[11] A: No.
[12] Q: So, is it fair to say that without Eric, you wouldn’t have
[13] known how to get on an IRC chat room?
[14] A: Without Eric, I would not have known how to do it without
[15] further research.
[16] Q: And what kind of research would you undertake to learn?
[17] A: I would have gone to a search engine, typed IRC or
[18] Internet relay chat, probably within the first page of hits, I
[19] would have found a tutorial on how to do it.
[20] Q: Now, do you know how Eric found a person to trade with?
[21] A: I’ve asked him how he did it and he’s told me, so I
[22] believe I know.
[23] MR. GARBUS: Judge, what I’m told, and I don’t know
[24] whether this is so or not, but the exhibit that we have is not
[25] the entire log, so that the times that you’re referring to in

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[1] the exhibit do not refer to the entire IRC conversation.
[2] MR. SIMS: Your Honor?
[3] THE COURT: I think the witness has made abundantly
[4] clear that there are two logs. That the one that we have here
[5] is the entire unaltered log of that part of the conversation
[6] that took place privately between eaRoSoL and VaioBoy and that
[7] that was preceded by a dialogue that occurred on the chat room
[8] that was visible to the public and we do not here have a
[9] transcript or log of the public session.
[10] That’s what I understand to be the fact. Now, do I
[11] have it right, Dr. Shamos?
[12] THE WITNESS: That’s correct.
[13] BY MR. GARBUS:
[14] Q: And we don’t know how much time the public session took,
[15] is that right?
[16] A: I know how long Eric told me it took.
[17] Q: Are there any notes indicating how long Eric told you it
[18] took?
[19] A: Well, I’ve thought the log had been provided to you.
[20] Q: Now, once you started the trade, how long did that then
[21] take?
[22] A: The trade took approximately six hours.
[23] Q: And are there any records of that?
[24] A: It’s possible that we might be able to go back to the
[25] director on a hard disk and find the date of creation of the

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[1] relevant files.
[2] MR. GARBUS: I would like that hard disk, sir.
[3] Perhaps you can bring it in tomorrow morning.
[4] Q: Now, let me ask you this —
[5] THE COURT: Mr. Garbus, that’s an application to be
[6] made to the Court and to be made later.
[7] MR. GARBUS: I apologize. I apologize. I apologize.
[8] I’m told by Mr. Hernstadt that —
[9] Q: Now, I guess what I have trouble understanding is by the
[10] way, how many other cases have you testified in?
[11] A: Between five and ten.
[12] Q: And these are cases where you’ve actually got on the stand
[13] and testified as a witness?
[14] A: I either testified on the stand as a witness or was
[15] deposed.
[16] Q: And how many other cases were you retained where you did
[17] not testify?
[18] A: I don’t recall, but it’s a small number, possibly two.
[19] Q: And haven’t attorneys, when they have retained you, told
[20] you to keep records of what you’ve done in case you testify in
[21] a courtroom?
[22] A: It has never happened.
[23] Q: No one has ever told you to keep a record of any
[24] experiment you’ve ever done?
[25] A: That’s right.

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[1] Q: When you do experiments for the university, do you keep
[2] records of that?
[3] A: That presumes that I do experiments for the university.
[4] Q: Do you?
[5] A: I don’t do what you would refer to as “experiments.”
[6] Q: Now, sir, what time then does that whole process finish,
[7] about 6 in the morning?
[8] A: Something like that.
[9] Q: And did there come a time, by the way, when you watch the
[10] film that you have traded for?
[11] A: Yes.
[12] Q: And when is that?
[13] A: I believe I watched it either soon after its completion,
[14] either right that night or after I had gotten some sleep.
[15] Q: And you’re in your office, I gather, that night from what
[16] is it, 11 to 6?
[17] A: No, I suspect that I — as I say, I don’t have a specific
[18] recollection, but it sounds like the kind of time that I would
[19] have left, about 4.
[20] Q: About 4?
[21] A: Yes.
[22] Q: That you would have left about 4?
[23] A: Yes.
[24] Q: And did you bill Proskauer for your time, those five
[25] hours?

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[1] A: Well, I'm sure I billed — I will be billing Proskauer for
[2] more than five hours that day.
[3] Q: No, no. The five hours that you were in your office from
[4] 11 to 5 while Mr. Burn was down — was trading film?
[5] A: If I was working on this case, then I would be billing
[6] them for that. If I was working on other material, I wouldn't
[7] be billing them for it.
[8] Q: Do you have time sheets with you here today?
[9] A: No.
[10] Q: Did we ask you for time sheets Saturday?
[11] A: Yes, I was unable to locate them because they're on a
[12] computer that I can't access from here.
[13] Q: Did you make an attempt to access that computer?
[14] A: Yes.
[15] Q: Didn't you tell us that Mr. Burns would bring that
[16] computer when he came here Tuesday?
[17] A: No, I did not say that.
[18] Q: Don't you recall a conversation where we asked you to
[19] produce the computer?
[20] A: Yes — it's computer? No. You didn't ask me to produce
[21] the computer. The computer is a desk top that's sitting in my
[22] office at CMU.
[23] I thought at the time that the file in question might
[24] have been on my home computer, in which case, I might have a
[25] CD-ROM backup of it with me and be able to obtain the file.

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[1] It's unfortunately on my office computer.
[2] Q: Now, for these three days, let's say from the time you
[3] bought the computer until the time this process ends, how many
[4] hours did you bill Proskauer?
[5] A: I haven't billed Proskauer for any hours yet. What I do
[6] is I write down the number of hours I spend on each day on a
[7] particular matter and what I do for that time, I don't write
[8] it down by time of day.
[9] Q: And where are those records?
[10] A: The place I precisely told you just now. They're on a
[11] file on the computer in my office at CMU.
[12] Q: Now, would that file in any way indicate what you did
[13] when?
[14] A: No, it would indicate what I did. It wouldn't indicate
[15] what I did when and there's not a high degree of specificity
[16] to it.
[17] THE COURT: Kind of like lawyers' diaries.
[18] Q: And how much did you charge, if anything, for the time
[19] that of your colleague?
[20] A: I'm charging \$100 an hour for the time of my colleague.
[21] Q: What is he being paid?
[22] A: \$100 an hour.
[23] Q: How much time has he put in?
[24] A: I don't know.
[25] Q: Now, so you viewed the film on what, day 4?

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[1] A: I don't actually know when we started counting days, but
[2] I'm viewing the film on the 28th of July.
[3] Q: Of June?
[4] A: June, June.
[5] Q: And where are you when you're viewing it?
[6] A: In Eric's office at CMU looking at the Sony laptop that we
[7] viewed today.
[8] Q: And when is this?
[9] A: I don't recall the time of day. As I say, I presume it
[10] was either very late at night or early the very next morning.
[11] Q: We are talking about the viewing?
[12] A: Yes, the viewing, I wanted to view it as soon as it was
[13] produced.
[14] Q: And what is your best recollection as to what time you're
[15] viewing this film, if you have any?
[16] A: I don't have a better recollection than I've given you.
[17] Q: Now, you mentioned going off to Hawaii?
[18] A: Yes.
[19] Q: And is that the time that Eric does the other test?
[20] A: I'm not sure what you mean by "the other test."
[21] Q: Was there another film that Eric tried to apply DiVX do?
[22] A: I believe Eric tried to apply — tried to DiVX The Fight
[23] Club.
[24] Q: And when was that?
[25] A: I don't know.

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[1] Q: And what happened?
[2] A: He was not successful.
[3] Q: Did he do that at your direction?
[4] A: No.
[5] Q: Now, you say he was not successful. Tell me what
[6] happened.
[7] A: Well, I wasn't — I wasn't in. I can give you what he's
[8] told me that DeCSS doesn't work on The Fight Club.
[9] Q: And why doesn't DeCSS work on The Fight Club?
[10] A: I don't know.
[11] Q: Did you try and make determination as to why it doesn't
[12] work?
[13] A: No.
[14] Q: By the way, do you know that DeCSS doesn't work on any
[15] Disney films?
[16] A: I don't know that.
[17] Q: Have you ever heard of that before?
[18] A: I've heard that it doesn't work on The Jungle Book.
[19] Q: And do you know why that is?
[20] A: No, I have surmised, but I don't know.
[21] Q: Now, again let me get it straight. So, we have used the
[22] compression techniques, the DiVX, let's say for Sleepless in
[23] Seattle. When does Eric next use a compression technique, is
[24] that when you're in Hawaii?
[25] A: I don't know, because the only things that I've testified

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[1] to are the things in my declaration. Anything he's done
[2] subsequent to that don't appear in my declaration which was
[3] submitted prior to my going to Hawaii.
[4] **Q:** But you know he failed let's say on the DiVX'd. Do you
[5] know what movie he was trying to compress?
[6] **A:** He was trying to go — he was trying to deal with The
[7] Fight Club. He was unable to do it. I don't know why he did
[8] it, other than it sounds like a very intelligent experiment to
[9] me.
[10] **Q:** Do you know if he tried to use DeCSS?
[11] **A:** I believe he did.
[12] **Q:** And did you ever ask him — he was here today. Did you
[13] ever ask him why he couldn't use DeCSS to make a copy of The
[14] Fight Club?
[15] **A:** I did ask him.
[16] **Q:** And what did he say?
[17] **A:** He said, I don't know.
[18] **Q:** Do you know how long he spent trying to make a copy of The
[19] Fight Club?
[20] **A:** No, I don't know.
[21] **Q:** 30 hours? 50 hours?
[22] **THE COURT:** We know what "don't know" means.
[23] Next question?
[24] **Q:** Do you know if he made any memos or notes?
[25] **A:** I don't know.

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[1] **Q:** Did you ever tell anybody at Proskauer that you could not
[2] use DeCSS to make a copy of The Fight Club?
[3] **A:** I don't recall. It's logical that I would have, but I
[4] don't specifically recall doing that.
[5] **Q:** And do you know as you stand here today any other
[6] individuals who have tried to use DeCSS and failed?
[7] **A:** Do I know them personally? I have anecdotal evidence that
[8] they exist. I don't know any of them personally.
[9] **Q:** And you say you have anecdotal evidence that other people
[10] have tried DeCSS and it does not work, is that right?
[11] **A:** On specific films; yes.
[12] **Q:** Which specific films?
[13] **A:** As I said, The Jungle Book.
[14] **Q:** That's the only one?
[15] **A:** It's the only one I know of.
[16] **Q:** Has anyone ever told you that it works on any particular
[17] film other than the ones you tried it on?
[18] **A:** DeCSS specifically?
[19] **Q:** Yes.
[20] **A:** No human being has told me that.
[21] **Q:** Going through Exhibit 116B, which is the list of all of
[22] the films that you saw, do you know whether DeCSS can be used
[23] for any one of them?
[24] **A:** I think Sleepless in Seattle is on the list, so.
[25] **Q:** Other than that?

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[1] **A:** No. I know it's alleged to have been used by the people
[2] who supposedly did it, but I don't know that it was done that
[3] way.
[4] **Q:** Thank you very much.
[5] Now, when you say it was alleged to have been used,
[6] do you know if the MPA ever tried to contact any of these
[7] people who ever said they used DeCSS?
[8] **MR. SIMS:** Your Honor, if we have to go through this
[9] stuff — examination twice, we'll really be here for a long
[10] time.
[11] **THE COURT:** And your point is what?
[12] **MR. SIMS:** Asked and answered. He asked that
[13] question and it was answered.
[14] **MR. GARBUS:** I don't think I asked that question, not
[15] that question.
[16] **THE COURT:** I don't think precisely that way.
[17] Overruled.
[18] **A:** No, I don't know.
[19] **Q:** Are you an expert on security systems?
[20] **A:** I wonder if you could make more precise what you mean by
[21] "security systems."
[22] **Q:** Security systems for computer technologists, code CSS,
[23] water marks?
[24] **A:** I'm an expert to the extent that I follow the field and I
[25] give lectures on the topic. I'm not an expert to the extent

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[1] that I do active forefront research in that area.
[2] **Q:** Now, did you at any time ask anybody at Proskauer or the
[3] MPA what they did after they first learned that there were
[4] cracks in CSS in 1997? I know you learned it later on, but
[5] when you learned it, did you ever ask anybody at Proskauer or
[6] the MPA: Why didn't you do anything for two years when you
[7] knew there were cracks?
[8] **MR. SIMS:** Objection.
[9] **THE COURT:** Sustained.
[10] **Q:** Any conversation like that?
[11] **MR. SIMS:** Objection.
[12] **THE COURT:** Sustained.
[13] **Q:** Would you agree that the DiVX version of the Matrix you
[14] saw is darker than the original DVD?
[15] **A:** It didn't seem that way to me.
[16] **MR. GARBUS:** The Court, I'm sure, will see it and
[17] form its own conclusion.
[18] **Q:** With respect to computer connections, can we agree that
[19] the transfer rate is limited by the slowest part of the entire
[20] connection?
[21] **A:** Yes.
[22] **Q:** So, even if you have the fastest Internet available, if
[23] your connection to the Internet is slow, the transfer rate is
[24] slow, is that correct?
[25] **A:** Yes.

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[1] Q: Do you know anything about the difference in the loads at
[2] Carnegie during particular hours?

[3] A: I can describe generally the factors that would contribute
[4] to there being differences. I don't know numerical statistic
[5] on what the loads are.

[6] Q: Now, you talked about this 20-minute transfer?

[7] A: Yes.

[8] Q: Is it fair to say if 10 students were doing it at the same
[9] time on the same Internet to the same machine that that
[10] transfer would take more than three hours?

[11] A: O.K. The transfer that involved 20 minutes did not
[12] involve the Internet. That was purely done internally at CMU.

[13] Q: And how many people were on that connection at that time?

[14] A: I don't know. We were receiving a third of the available
[15] bandwidth.

[16] Q: Do you know if anybody else was on it?

[17] A: I presume that they were or we would have gotten more than
[18] of the bandwidth.

[19] Q: You've never traded a DiVX'd with anyone ever found
[20] through iSONEWS, is that right?

[21] A: That's right.

[22] MR. GARBUS: I think I may be through. Just a
[23] moment, your Honor.

[24] (Pause)

[25] MR. GARBUS: Just a few questions.

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[1] Q: How much time did it take to install Windows and redo the
[2] first steps of the experiment?

[3] A: The installation of Windows was relatively rapid. Eric
[4] has done that numerous times. The redo of all the initial
[5] steps took about half the time the second time as it did the
[6] first time.

[7] Q: Did you use CMU's Windows, is that right?

[8] A: Yes.

[9] Q: And wasn't that in violation of CMU's regulations by which
[10] you're not allowed to do that for your own private use?

[11] A: I don't know. I don't necessarily regard this as my own
[12] private use.

[13] Q: Isn't it a violation of Carnegie-Mellon's rules for you to
[14] do this for Proskauer's use?

[15] A: I don't believe so. Faculty frequently consult are
[16] encouraged and some departments required to consult. They are
[17] able to use the facilities provided for them by CMU seemingly
[18] without any violation of university policy.

[19] Q: Have you ever seen the site license of Carnegie-Mellon?

[20] A: I have seen site licenses at vary times in my career at
[21] Carnegie-Mellon. I haven't seen it for Windows.

[22] MR. GARBUS: We'll have Mr. Teretsky from
[23] Carnegie-Mellon in a few days.

[24] That's all for now.

[25] THE COURT: Thank you. Any redirect?

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[1] MR. SIMS: Yes, your Honor.

[2] REDIRECT EXAMINATION

[3] BY MR. SIMS:

[4] Q: Dr. Shamos, just so we are clear, the session of your
[5] experiment that dealt with DeCSS'ing Sleepless in Seattle, did
[6] that require — did that depend on the amount of traffic going
[7] on in the land at CMU at that time?

[8] A: No, the DeCSS'ing process is done completely locally on
[9] the client machine, in this case the Sony laptop. In fact, my

[10] recollection is that the connection to the land was even
[11] disconnected during the time after we had obtained the
[12] necessary software, but it didn't use any land connection.

[13] Q: And would traffic on the land affect in any way the DiVX
[14] processing time that you recorded on?

[15] A: No, once all the tools obtained to do it, that is again a
[16] legal process on the client.

[17] Q: Now, once a DeCSS'd DiVX'd copy of a motion picture had
[18] been created, is it available for transfer for the next 20
[19] years regardless of whether it was made at night or during the
[20] day?

[21] A: Presumably there isn't some technological revolution of
[22] that would obsolete the format on which it started. Yes, it
[23] is available until such revolution.

[24] Q: Do you know whether the traffic on the land of CMU is
[25] greater or lesser from 6 to midnight than it is during the

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[1] day?

[2] A: I don't. The population of users who use it and what they
[3] do with it changes at the various times during the day.
[4] Students are in class during the day, but they're in their
[5] dorm rooms at night. That's when they use it.

[6] Faculty is in their offices during the day and often
[7] at home at night, and so the office use is lower at night.

[8] MR. SIMS: Nothing else, your Honor.

[9] THE COURT: All right.

[10] Thank you. Anything further for this witness, Mr.
[11] Garbus?

[12] MR. GARBUS: Your Honor, we had made a motion to
[13] exclude him as an expert. Given the fact that this is a
[14] non-jury trial, I suppose we can wait for another time to
[15] discuss that.

[16] THE COURT: Yes, I think so.

[17] All right, anything further?

[18] MR. SIMS: Nothing further.

[19] MR. GARBUS: Nothing — the only thing is we worked
[20] out a practice I think last week, your Honor, that in order to
[21] avoid unnecessary cross-examination, we could just put in
[22] deposition testimony and appropriately designated and they
[23] could object and we could object and you can — so, we will
[24] then put in — we've just — we haven't yet gotten it all. We
[25] will designate —

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[1] **THE COURT:** That's fine.
[2] The witness is excused.
[3] **MR. SIMS:** Your Honor, just so we are clear, that was
[4] not an arrangement we made.
[5] **THE COURT:** No. That's what Mr. Garbus asked for
[6] that and I said it was fine. There was really no sense with
[7] 100 people sitting in the courtroom listening to somebody read
[8] what I can sit down and read. We could have gotten the phone
[9] book, too.
[10] **MR. GARBUS:** I think there are two open issues unless
[11] I can raise them.
[12] **THE COURT:** The two I have on my list is Mr.
[13] Stevenson and Mr. Garbus. Let's take up Mr. Stevenson first.
[14] **MR. GARBUS:** We have him here. He had been involved
[15] in this early on. They have reports of his. He has submitted
[16] an affidavit. We had put him on the witness list. We are
[17] prepared to give him, as they requested, an hour's deposition
[18] and have him testify out of turn tomorrow.
[19] **MR. SIMS:** Your Honor, as you may recall —
[20] **THE COURT:** Before you go, Mr. Sims, give me a short
[21] offer of proof, I mean short, from Mr. Stevenson just so I
[22] know what we are talking about.
[23] **MR. HERNSTADT:** Mr. Stevenson is a computer
[24] program — he's an expert in source code and object code.
[25] He's an enthusiast who was the first person who wrote the

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[1] crypt analysis. I would call him an expert in photography as
[2] well, he did the crypt analysis.
[3] **THE COURT:** And in substance, what is he going to
[4] tell me?
[5] **MR. HERNSTADT:** He's going to tell you how difficult
[6] it is to break the CSS code. He's going to talk about the
[7] connection between the CSS and Linux. He's going to talk
[8] about the assets and open source of the DVD player. He's
[9] going to talk about —

[10] (Continued on next page)

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[1] **THE COURT:** There is no disagreement that there is no
[2] open source DVD player. Is there a disagreement about that?
[3] **MR. SIMS:** There are in fact licenses which have been
[4] granted, and people are undertaking to create them. They have
[5] licenses, but there is no dispute that there is not one
[6] available for purchase at any store in Manhattan.
[7] **MR. HERNSTADT:** In fact that's incorrect. There are
[8] closed source licenses that have been granted to a couple of
[9] people who are attempting to develop a Linux DVD player, but
[10] it's my understanding that under no circumstances will persons
[11] developing a closed source DVD player be permitted to release
[12] the source, so other people can take that DVD player as it's
[13] normally done in the community.
[14] **THE COURT:** That piece of it is an object of
[15] controversy. Mr. Sims like most good lawyers has a lot of
[16] trouble just saying yes to something the other side proposes.
[17] **MR. GARBUS:** May I interfere?
[18] **THE COURT:** Yes.
[19] **MR. GARBUS:** One of the issues in the case, and your
[20] Honor has mentioned this, is why was DeCCS created, was it
[21] created as a tool for pirates or was it created for the Linux
[22] system. And I think that your Honor will make his own
[23] determination clearly about whether or not that's relevant to
[24] the circumvention under 1201, but what Mr. Stevenson can
[25] testify to, since he was involved in the work in creating the

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[1] DeCSS so that the Linux people could have an open source
[2] system, he could also testify about the other kinds of rippers
[3] and the efficacy of DeCSS, but I think it's most clinical, and
[4] your Honor hasn't seen that yet, and it was not given to you
[5] at the preliminary injunction hearing, there is a pack of
[6] papers about six pages high — about six inches high, maybe a
[7] foot high —

[8] **THE COURT:** You got my hopes up for a minute.

[9] **MR. GARBUS:** — where there is a discussion about the
[10] Linux group and the attempt of the Linux group to create the
[11] Linux machine. And the extent to which Frank Stevenson can
[12] give you information about that, that I think becomes
[13] relevant. Again, the details of his testimony are better
[14] known to Mr. Hernstadt than I, but I find that relevant.

[15] **THE COURT:** How long do you expect to have him on
[16] direct?

[17] **MR. HERNSTADT:** I think we can finish his direct in
[18] an hour and a half, probably an hour.

[19] **THE COURT:** Mr. Sims?

[20] **MR. SIMS:** In the first place, I believe it is
[21] undisputed that Mr. Stevenson did not create DeCSS, and we
[22] don't believe that it's an issue in the case in any event.
[23] Second of all, if your Honor will recall we had
[24] repeatedly said we were prepared to depose everyone who might
[25] be coming to trial and ask for dates.

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[1] **THE COURT:** I remember that.
[2] **MR. SIMS:** And there was a discovery deadline first
[3] of June 5 and then June 11.
[4] **THE COURT:** July 5.
[5] **MR. SIMS:** Absolutely, July 5 and 11. We have
[6] repeatedly asked for dates and were provided no date for
[7] Mr. Stevenson prior to those times, and we therefore sent your
[8] Honor last week a letter asking for Mr. Stevenson to be
[9] excluded on the grounds of the failure to comply with
[10] discovery deadlines set by the Court.
[11] **THE COURT:** All right.
[12] **MR. SIMS:** In addition, there is a pending motion in
[13] limine that would exclude him.
[14] **THE COURT:** I understand that. You have all kept me
[15] busy with other matters for the last couple of days.
[16] **MR. SIMS:** If I might, I'm also advised this
[17] testimony is cumulative of the deposition testimony of two
[18] other people who are being brought to trial: Mr. Snyder and
[19] Mr. Appel.
[20] **MR. HERNSTADT:** Mr. Stevenson did the crypt analysis.
[21] He is the man on the scene. He can talk about things from
[22] experience, from personally having done it as opposed to
[23] assessing it.
[24] Additionally he is a participant in a lot of the
[25] Linux lists, so he can talk about the connection between CSS

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[1] and DeCSS and Linux, which Mr. Snyder cannot.
[2] **THE COURT:** All right. Here is what we are going to
[3] do. It is clear that the defendants did not comply with the
[4] orders relating to this aspect of discovery, and there is a
[5] nontrivial argument made by the plaintiffs that I should rule
[6] them out.
[7] Nonetheless, contrary to some things that have been
[8] said, I'm very mindful of the expedited schedule in this case
[9] which serves a lot of interests, even for parties who don't
[10] always recognize them, and I think in all the circumstances
[11] some balance ought to be made to permit this man to testify,
[12] and I think that's doubly appropriate since he is I'm informed
[13] a resident of Norway and it's not clear that it was within the
[14] power of the defendant simply to order him to show up in New
[15] York for a deposition. So, I will hear his testimony, and I
[16] am also going to give them the opportunity to depose him
[17] tonight, as has been suggested. What we will do, because
[18] obviously everybody has a lot of demands on their time right
[19] now, is this: The direct tomorrow is not to exceed an hour
[20] and a half. The deposition is not to exceed an hour and a
[21] half. If you people work out a different arrangement for a
[22] longer deposition, I will work out a different arrangement on
[23] the length of the direct. It just seems to me that that's a
[24] fair balance. And anything pretty much that you can agree to
[25] between yourselves, even if it is at some variance with that,

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[1] probably will be acceptable.
[2] I do once again urge that to the extent this man is
[3] coming here to tell me things that are not genuinely disputed,
[4] that you simply stipulate to it.
[5] Now, I do appreciate that there is probably some
[6] element of perhaps the man wants to testify in this case. I
[7] don't know that to be true, but it might be. I understand
[8] that too, but let's just try to do this as efficiently as
[9] possible.
[10] That takes care of Mr. Stevenson.
[11] What about Mr. Burns?
[12] **MR. HERNSTADT:** I think it has become clear that Mr.
[13] Burns did most of the experiment. I think the reason that it
[14] is important to talk to Mr. Burns is that I think it has also
[15] become clear that that experiment was directed entirely by
[16] Proskauer, that Dr. Shamos was given direct instructions to
[17] purchase a computer, to do this, to do this, to go to 2600 and
[18] through 2600 get the DeCSS and he carried out those
[19] instructions. There is no expertise required for that. I
[20] would say that a 13 year old can do it, but that goes without
[21] saying. I think even a person who is computer illiterate
[22] could follow those directions given enough time. No expertise
[23] at all was required.
[24] So, it's a question of fact, what happened. And
[25] there are definitely disparities in terms of the burn date on

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[1] the movies, what happened on the IRC channel, what other
[2] things went on during the DiVXing process. I think we are
[3] entitled to know the basis for the opinions that were stated
[4] by Dr. Shamos, and to the extent they were provided by work
[5] done solely by Mr. Burns, and a significant part of it was
[6] done by Mr. Burns, we are entitled to see what Mr. Burns did.
[7] **THE COURT:** Mr. Sims?
[8] **MR. SIMS:** I think if Congress had enacted or the
[9] Judicial Conference had enacted a different version of Rule
[10] 703, that would be a perfectly good argument, but under 703 I
[11] think an expert is entitled to rely on the kinds of materials
[12] relied on by persons in that field. And I believe that
[13] persons in that field are allowed to and they customarily do,
[14] the testimony is that they do rely on those kinds of
[15] assistance for this kind of work. Therefore, I think under
[16] Rule 703 —
[17] **THE COURT:** That gets Dr. Shamos's opinion in, but it
[18] doesn't necessarily go beyond it. If we were trying a plain
[19] old ordinary medical malpractice case and the alleged
[20] malpractice was some kind of misdiagnosis by the hospital, and
[21] the attending physician came in and testified that he received
[22] a report from the pathology lab that said something was not
[23] cancerous and it turned out to be cancerous, it may have been
[24] perfectly reasonable for the attending to have relied on a
[25] report from the pathology lab, and there may well have been

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[1] malpractice anyway if the pathologist failed to perform the
[2] review of the tissue appropriately. So, you haven't really
[3] touched their point yet, Mr. Sims.
[4] **MR. SIMS:** Well, I thought that I had, your Honor.
[5] The experiment was conducted, directed by Dr. Shamos, and he
[6] was in and out of the room, and he checked on the result and
[7] he checked on the things that were done, and I believe that
[8] that's the way experts customarily testify.
[9] **THE COURT:** Look, you have offered me CD-ROMs that
[10] Mr. Burns burned on the basis of the DiVX versions that
[11] allegedly were made, using DeCSS on files swapped over the
[12] Internet, and you have invited me to draw conclusions about
[13] the quality of the resultant product. Now, it seems to me in
[14] those circumstances they are entitled to go into the question
[15] of what is on those CD-ROMs and how it got there, because it
[16] goes to the issue of whether the product that you have offered
[17] me is or isn't persuasive evidence.
[18] **MR. SIMS:** Then we will make Mr. Burns available.
[19] **THE COURT:** I thought that was the right answer.
[20] Okay.
[21] Now the one other thing I want to remind you before
[22] we break for the day is that you must provide the court
[23] reporters with that glossary I mentioned before we start
[24] tomorrow.
[25] What time are we starting now? 9 o'clock, folks.

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[1] **MR. HERNSTADT:** May.
[2] **MR. GARBUS:** May we keep our documents here?
[3] **THE COURT:** You certainly may. The courtroom is
[4] going to be locked. There is a lot of sensitive material in
[5] the courtroom, and we give no representations or warranties
[6] about how effective our security is, but we will endeavor to
[7] lock the courtroom and keep people out and keep everything
[8] secure.
[9] **MR. GARBUS:** May I ask one further question? When
[10] cross-examining, in direct examination, using confidential
[11] documents and referring to confidential documents or
[12] privileged documents, I presume the practice would be if there
[13] is any question about it to let the Court see it before the
[14] examination on that document.
[15] **THE COURT:** Yes, I think that absolutely has to be
[16] the case. There is no question about that.
[17] **MR. SIMS:** It would be helpful, your Honor, if we
[18] could have first thing in the morning or after the lunch break
[19] from our adversaries a list of what is going to come up so we
[20] can review it.
[21] **THE COURT:** To whatever extent you people can work
[22] that out, please work it out. If it comes up in the course of
[23] the day we will deal with it. And I really would urge both
[24] sides to manage the examinations in a way — and I would be
[25] surprised if it couldn't be done — that would enable me to

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[1] avoid closing the courtroom at any point in this trial. I
[2] don't want to do that. Okay. Thank you.
[3] **MR. SIMS:** Thank you, your Honor.
[4] (Trial adjourned to July 18, 2000 at 9:00 a.m.)
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[1] INDEX OF EXAMINATION
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[4] PLAINTIFF EXHIBITS
[5] Exhibit No. Received
[6] 112, 113, 114A through 114E, and 265
[7] 115A and 115B113
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Lawyer's Notes

CASE: Universal v

DOCKET #: _____

JUDGE: _____

TRANSCRIPT DATE: _____

CORRECTED PAGES

(Please insert into your transcript)

1 and DeCSS and Linux, which Mr. Snyder cannot.

2 THE COURT: All right. Here is what we are going to
3 do. It is clear that the defendants did not comply with the
4 orders relating to this aspect of discovery, and there is a
5 nontrivial argument made by the plaintiffs that I should rule
6 them out.

7 Nonetheless, contrary to some things that have been
8 said, I'm very mindful of the expedited schedule in this case
9 which serves a lot of interests, even for parties who don't
10 always recognize them, and I think in all the circumstances
11 some balance ought to be made to permit this man to testify,
12 and I think that's doubly appropriate since he is I'm informed
13 a resident of Norway and it's not clear that it was within the
14 power of the defendant simply to order him to show up in New
15 York for a deposition. So, I will hear his testimony, and I
16 am also going to give them the opportunity to depose him
17 tonight, as has been suggested. What we will do, because
18 obviously everybody has a lot of demands on their time right
19 now, is this: The direct tomorrow is not to exceed an hour
20 and a half. The deposition is not to exceed an hour and a
21 half. If you people work out a different arrangement for a
22 longer deposition, I will work out a different arrangement on
23 the length of the direct. It just seems to me that that's a
24 fair balance. And anything pretty much that you can agree to
25 between yourselves, even if it is at some variance with that,

